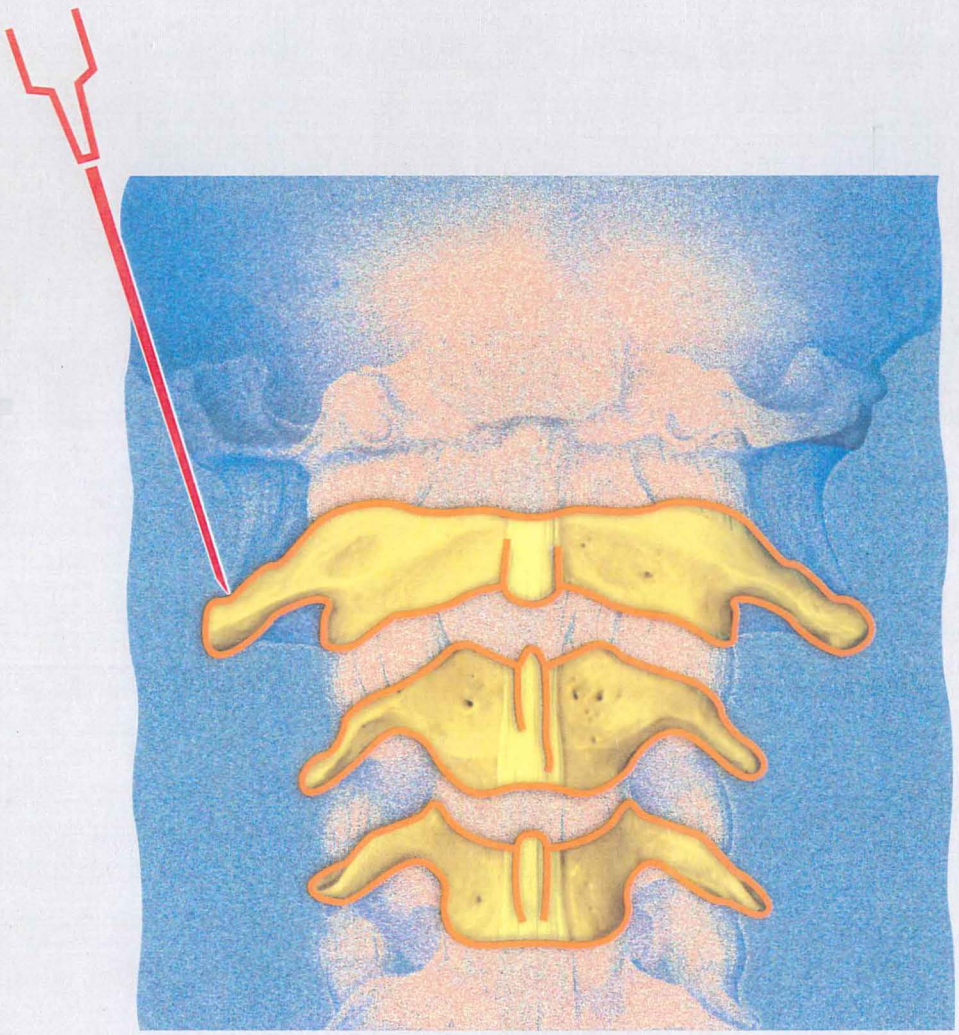
Complementary Medicine

Manual of Neural Therapy According to Huneke

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Thieme

Manual of Neural Therapy According to Huneke

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Preface to the 1st English Edition

Therapy using local anesthetics occupies an ever more important place amongst alternative methods in medicine. The President of the American Society of Anesthetists, Professor J. J. Bonica, has stated that the nerve block as a diagnostic, prognostic, prophylactic, and therapeutic method has been received with ever-increasing interest in the USA and has been employed ever more frequently in recent years. He has expressed the view that the nerve block used as a specific therapy may well be the best clinical means to treat illness.

But the "nerve block used as a specific therapy" is precisely what the Huneke brothers of Germany introduced into medicine in 1928. They called it "neural therapy." That this is not generally known in the USA is less remarkable than the fact that even in the German-speaking parts of the world few people are aware that the use of local anesthetics for therapeutic purposes, which is far more widespread in these countries, goes back to the Huneke brothers. As long ago as 1925, the great French surgeon, Leriche, whose specialty was surgery of the sympathetic chain, observed healing reactions produced by local anesthetics administered before the operation and praised procaine as the "surgeon's bloodless knife," the use of which sometimes made surgery necessary. But these experiences were allowed to be forgotten.

In Russia, the observations made by Spiess on the anti-inflammatory effects of local anesthetics were investigated more closely. There, pupils of Pavlov, such as Speransky, Vishnevski, Bykow, Wedenski, and others, confirmed that it is possible to influence the regulating mechanisms of the neurovegetative system by means of procaine. These discoveries prompted Speransky to construct *A Basis for the Theory of Medicine*, which he published after emigrating to the USA in 1936. For a time his work remained controversial, but today it is again receiving recognition. Before him, Ricker had attempted to provide a theoretical basis for all vital processes, including the phenomena of neural therapy, in his *Pathology as a Science; Pathological Relationships*. Later, Wiener's teachings on biocybernetics and Pischinger's observations on the basic neurovegetative system provided new viewpoints to explain these phenomena of healing.

The Huneke brothers discovered the therapeutic potential of procaine by empirical means and independently of their predecessors. They recognized the importance of their discovery and expanded their systematic observations into a method that has now established itself particularly in continental Europe and in South America. Because it is so successful and has such a wide therapeutic spectrum, it has been received with special enthusiasm by the general medical practitioner, who inevitably finds him or herself standing in the firing line. Neural therapy does not regard itself as a substitute for scientific medicine as taught at medical schools, but as complementary to it. This is especially the case where mainly functional disturbances are involved, whose interacting cause–effect relationships cannot be accurately determined because they result from cybernetic regulatory dysfunctions.

Fleckenstein proved that procaine also possesses an unusual feature apart from its well-known effectiveness as a local anesthetic. The cell, which has been depolarized by endogenous and exogenous stimuli, is able, under the protection afforded by procaine, to reseal the cell membrane that has become permeable. The potassium-sodium pump is thus enabled to displace the sodium that has penetrated into the cell and to replace this again with potassium. By this means, the physiological potential of –60 mV to –90 mV needed by the cell in order to function normally is built up again. This enables us, with the use of local anesthetics such as procaine or lidocaine, to repolarize depolarized cells and thus to reactivate them in their functions, cells that would otherwise be incapable of repolarizing themselves from their own resources. From this it will be obvious that successful treatment by these injections depends on the correct positioning of the local anesthetic and on the use of a special technique in administering it.

The technique of using accurately sited injections in the area where the symptoms occur is known as "segmental therapy." There are four methods that produce a segmental effect with the use of local anesthetics:

1. Injection directly to the site of pain. The accurately sited injection of procaine or lidocaine is effective as much in treating painful conditions in the muscles, ligaments, tendons, bones, and nerves as it is for contusion, hematomas, abrasions, painful scars, and traumatic damage of any type.
2. Acting on painful areas by means of paravertebral injections in the relevant segment.
3. Neural-therapeutic treatment by direct injection to the sympathetic chain and its ganglia, i.e., the stellate, ciliary, pterygopalatine and/or the Gasserian

ganglion etc., or of the abdominal and lumbar sympathetic chains.
4. Injections into and around arteries and veins, to pleura and peritoneum, and to the afferent nerves.

Segmental therapy has now become an integral part of the curriculum at a number of medical schools in continental Europe and elsewhere.

But in 1940, Ferdinand Huneke also found that, in addition, there may be "interference fields" active in the organism, which stand outside the segmental order and send out interference impulses via the nerves, and that these impulses can become pathogenic. In making this discovery, he revised and elaborated the old teachings on foci; these had assumed that a focus is capable of spreading bacteria and their toxins only via the bloodstream, thus causing illness. But any focus or interference field is a permanent source of irritation, because it burdens the regulating systems and continually forces the body to make up for these additional stresses. This compensation calls for a greater expenditure of energy and this, in its turn, produces disequilibrium in the body's economic system. The regulating systems are made labile and any banal irritation may act as an additional stress and can then produce faulty regulatory reactions. Once the tolerance threshold has been exceeded, functional disturbances or pathological symptoms will manifest themselves. Huneke showed us how such interference fields can be eliminated via the lightning reaction (Huneke phenomenon) by accurately sited injections of procaine or lidocaine. Normal cybernetic regulation is restored instantly and the pathological symptoms disappear, insofar as this is anatomically still possible.

Thus, neural therapy according to Huneke is, first of all, segmental therapy. When this fails to produce results, the search for and elimination of the interference field can lead us to our goal. This explains why this form of therapy is suitable for the treatment of all functional and organic disturbances resulting from neurovegetative dysregulation. In some cases, the emphasis is on pain, in others it is a matter of disturbances in internal or external secretions or of the blood supply to and nourishment of the tissues; then again the central factor may be a disturbance in the blood picture or dyskinesia of the smooth or striated musculature. Gross organ changes can also provoke functional disturbances as a secondary effect of an interference field, and these are therapeutically accessible to us. But this type of pathomorphology can also lead to feedback processes that then form a vicious circle and are thus capable of rendering our usual therapy ineffective. Once we have been able to find and eliminate the cause, such therapy is again capable of working. The consequence of all this is that this cybernetic regulating therapy has an extremely broad spectrum of indications, and this, at first sight, tends to strike one as rather strange.

The objective evidence for neural therapy, including the previously controversial Huneke phenomenon (lightning reaction), has meanwhile been produced, notably as a result of the work of the Austrian professors Bergsmann, Harrer, Kellner, Pischinger, and others. The present author, whom F. Huneke described as his master pupil, has assembled the theoretical principles, indications, and techniques in this book. It is in three parts:

- A. Theory and Practice of Neural Therapy According to Huneke.
- B. Encyclopedia of Neural Therapy, which provides an abstract in alphabetical order of the vast literature on the subject of the accurately sited treatment with procaine or lidocaine.
- C. The Techniques of Neural Therapy, which provides a detailed description of suggested techniques, again in alphabetical order for ease of reference.

Also provided are 141 illustrations and nine tables that are designed to help the reader commit to memory the information they contain.

The German version of this textbook has meanwhile reached its 14th edition and has helped to spread the practice of neural therapy to an ever-widening circle of physicians. May this first English edition make this widely applicable, successful, low-risk method, which impresses on account both of its economy and its freedom from side-effects, accessible to an even greater number of physicians and, through them, to their patients throughout the world.

Peter Dosch, MD

Preface to the 2nd English Edition

In June of 2005, my father, Dr Peter Dosch, died at the age of 90. When he left us, we lost the last great neural therapist, master scholar of Ferdinand Huneke. Through his life and work, Peter Dosch made neural therapy accessible to teachers and students. It is my honorable task to continue his opus. The need for a second English edition of the *Manual of Neural Therapy According to Huneke* proves the fact that neural therapy is now completely established internationally. Today, minds are open for a therapy that my father had to fight for, and neural therapy has found its place as a complement to classic orthodox medicine.

Mathias Dosch, MD

Preface to the 14th German Edition

The physician has but a single task:
to cure; and if he succeeds,
it matters not a whit
by what means he has succeeded!
Hippocrates (fl. ca. 400 BC)

Technical development has brought not only blessings and progress to mankind. The spirits that humankind has invoked are now beginning to threaten its own existence. Centralization and increasing mechanization in medicine have led to overspecialization and to soulless robot medicine. This has reduced the doctor–patient relationship to something that concerns itself with purely somatic aspects. The demand for a more psychosomatically oriented approach to medicine concerned with the human organism as a whole has remained largely unheard and unanswered. Merely talking about such a longed-for goal does not mean that it has, in fact, been attained, the less so as long as the ultimate objective is merely to classify illness by accurate diagnosis whilst an effective therapy is lacking. No wonder, therefore, that the personalities of doctor and patient have retreated ever further into the background. That childlike trust in the doctor, which saw in him or her something of an omnipotent parent figure, has been replaced almost totally by a mere service relationship, albeit still on a "professional" basis. And illness, from being regarded as an affliction willed by God, has changed into being seen purely as a malfunction due to chemical and mechanical factors.

Today's patient comes to us programmed differently from the way he or she was in the past. Health has become a consumer product. The patient and their health insurance pay, in exchange for which health is to be supplied in the form of repairs without any personal contribution on the patient's part. To the patient, the physician has become a mere technician with whom he or she enters into a contract, by which the doctor is only required to locate the defect and eliminate it with the aid of physics and chemistry. After all, isn't that what they are paid for?

The hospital has been industrialized. It no longer sees patients as individuals, but concentrates ever more on their illness as the basis for statistically significant diagnostic groups. It takes from them whatever it finds to be of use for its own purposes. Patients are depersonalized. They are made to submit to all the various procedures, generally without ever discovering why and with what results. The findings, rather than their condition, are at the center of clinical interest. It is not the patient's interests but those of the people of science that have to be satisfied. In this way, all too often, patients find themselves caught up in the wheels of an anonymous, pseudo-scientific machine and its attendant bureaucracy. At the same time, their treatment is almost exclusively based on symptoms, organ, and laboratory findings, but hardly ever deals with causes. However, the term "natural science" can in practice be justified only if such a science does not exclude the nature of the human being, since it is ultimately supposed to be serving humanity!

Whenever the citizen of today becomes aware of an unsatisfactory situation, he or she tends to call on the state to intervene. But, in this case, the state is equally helpless, for it is above all else the state itself that is interested in the scientist only in terms of his or her productivity. The general practitioner and family doctor, in the eyes of the state, are merely by-products of badly planned medical training, which, as it were, continues to produce these models despite the fact that there is no longer any market demand for them. That this formulation is not exaggerated is shown by the selection procedure for medical students. Admission is restricted to those who can prove by their examination results that they can learn facts, figures, and scientific principles. In this way, they are then able to provide the requisite guarantees that they will later be fully competent to recognize in a perfectly disciplined manner that which is scientifically and technologically feasible.

But this does not offer any guarantee that anyone with good university-entrance examination results will also bring with him or her the personality that is essential for being a physician, a capacity for easy human contacts, and empathy, to name but a couple. In addition, today there is little relation between medical training and medical practice. The "doctoring" aspects are relegated to second place and there is little attempt made to develop the ability of thinking and acting as a doctor. As a result, the patient often finds that he or she is in the hands of pure technicians who are more or less conversant with the diagnostic machinery under their control and who are more interested in a diagnosis capable of objective proof rather than in the person and fate of the patient him or herself.

All that I have stated here should not, however, be interpreted to suggest that there are not many good

doctors, in our sense of the word, amongst these scientists and clinicians. But these have become good doctors not as a result of their training but despite the principles that are regarded as solely valid in this kind of education. The cult of anything that can be supported by objective proof has obscured the fact that the living organism must be seen as a complete and indivisible entity and has precipitated medicine into a crisis. This has, in fact, been recognized, but no way out has yet been found because we are not prepared to abandon the schematic framework that we have come to regard as immutable.

It is not our intention in any way to deny that there has been progress in medicine or to suggest that technology in medicine is a creation of the devil. But we ought to make certain that progress does not in the end come to threaten our existence and that technology does not turn into technocracy. We want to help in trying to contain the excessively mechanistic ways of thinking and acting, in order to provide more room for a less harmful form of therapy that takes the regulating mechanisms and the body's own healing powers more into account. Exact logic, science, and the ivory-tower ideas of the specialist on the one hand; the art of healing, intuition, and thinking rather more in cybernetic terms on the other: these are the two opposing poles between which medical judgment seems to be moving today. But in the interests of the patient, whom we are called to serve, neither should exclude the other. Both are necessary, each the complement of the other, and should be used intelligently. The exact sciences have drawn frontiers in places where, for many sufferers from illness, it would have been better to build bridges. We regard it not as illegal, but rather as medically essential, to cross these frontiers wherever this may be necessary for the sake of our patients. Our duty is to help them, and to carry this out we need to expand the natural sciences, concerned as they are with mathematical logic, by another, more empirical form of science. For if we fail to do so, human medicine will become ever more inhuman and more sterile.

In this time of crisis, modern cybernetics forms a bridge between the sciences and has also begun to conquer medicine. Cybernetics, with the theory of interlinked and interacting control circuits, is able to make for a better understanding of Huneke's therapy and to help this method to its final breakthrough. For it has now become obvious that the Huneke brothers have discovered cybernetic laws of tremendous importance for the future of medicine. Neural therapists are already using these discoveries today!

The attentive reader of this book will recognize that neural therapy, acting as it does upon the cybernetic energy cycle, forms an intelligent alternative to impersonal, formalized medicine as it exists in our day. We do not want to replace this medicine, but we can complement it and make it more effective.

Meanwhile, neural therapy according to Huneke has set out on its worldwide conquest of medicine. It began in the surgery of two general practitioners. Now, general practitioners and specialists from every medical discipline are using it to an ever-increasing extent in their day-to-day treatment of patients. Nevertheless, outside Germany, the Huneke phenomenon is still little known as a positive therapeutic objective, and even in Germany the odor of magic and quackery still tends to be attached to it in the minds of the ignorant. It is surely remarkable that medicine, which is usually generous enough in naming names, has been so reluctant to attach the name of their discoverers and defenders to these teachings and often enough turns its back upon them, despite the fact that what they discovered is surely one of the greatest and most beneficial achievements in medicine of the last 50 years. Nevertheless, segmental therapy is now widely accepted as an integral part of orthodox medicine and forms an important part of neural therapy as such.

Yet the lightning reaction according to Huneke is still regarded as controversial. This is not altogether surprising if one bears in mind that the thought processes that it demands are enough to shake the foundations of medicine as built up over the centuries. Yet the lightning reaction is a fact and can be produced by anyone. It has taught us to heal in the true sense of the word, where we had previously been at the end of all our supposed wisdom that we have carried about with us since our days at medical school. This is why the discoveries based on this reality can no longer be talked out of existence. And if they no longer fit into the old scheme of things, then it must be high time to alter the scheme of things!

Time has been working in favor of neural therapy according to Huneke. The Viennese professors and their helpers have provided proof that the observations made by the two Hunekes were not a form of self-deception practiced by a pair of monomaniacs. They discovered by empirical methods the effects produced by procaine. These can now be proved by scientific methods. The reality of the lightning reaction has been scientifically proved and ought no longer to remain the controversial privilege of a handful of fanatics and outsiders. These developments show that the Huneke method has now become a matter of interest to some who would not previously regard it as fit for discussion or who adopted a wait-and-see attitude toward it. From outright rejection, we have reached a point where genuine interest is being shown. We, who were among the early partisans of the Huneke brothers, are happy to know that many are now beginning to recognize that what we pursued was not a will-o'-the-wisp, but that what we have done is to prevent such a logical and

successful method from being forgotten and dying with its discoverers. We shall therefore persevere in our efforts to dismantle any prejudice and misconceptions that may still continue to exist.

But the term "neural therapy" is not intended to suggest that we claim exclusive rights to the nervous system. No surgical, physical, psychotherapeutic, or other form of treatment can afford to leave the nervous system out of account. This term is thus intended simply to bear witness to the fact that by contrast with humoral, organic, or cellular therapy we have adopted a different point of view and are trying to see all the vital processes, including those of illness and cure, as being primarily conditioned by the nervous system. Not in isolation, but in a cybernetic and holistic sense. The term "neural therapy" has become familiar enough over the last 50 years. Nowadays, we should in a way prefer to see it replaced by the more accurate description "regulating therapy." But more important than the name is the fact that the successful results obtained prove us right to such an extent that we are bound to acknowledge that the road pointed out by the Huneke brothers is right.

Neural therapy is a modern, safe method with a good chance of producing an improvement or cure. If we apply the principle of using the least force commensurate with achieving the best result, it must be the method of our choice in the day-to-day work of general medical practice. But we also know the limitations of our therapy. We know that it is not a method that can be used to cure everything, nor can we ever deny any other successful method its right to exist. Particularly in medicine, the only criterion for judging any method should be whether it is successful: whatever and whoever is able to cure the sick is right!

Orthodox medicine is divided into a number of traditional specialties related to specific organs: eyes, ear–nose–throat, gynecology, orthopedics, etc. Internal medicine itself has a large number of organ-specific subdivisions: heart, lungs, stomach, kidneys, blood, etc. But the patient who walks into the general practitioner's surgery is a whole patient, consisting of an organic entity comprising body and soul, who complains of ills that can but rarely be coerced into the straitjacket of a scheme of things concerned only with separate organs. For this reason, general practitioners have not been able to let their view of this whole being become obscured, and this is why they are delighted to use neural therapy because it is a genuinely holistic therapy. It has given back to them their responsibility for almost every one of the specialist areas in medicine, it has released them from the "crisis in medicine" and from all that is therapeutic nihilism. It enables them to make use of the neurovegetative system for cures right across the whole spectrum of medicine and frees them from the depressing task of merely acting as signposts to the nearest specialist or clinic dealing with this or that specific organ.

Despite every form of resistance to it, its successes have enabled this method discovered by the Huneke brothers to remain alive after more than 50 years. Why it did not prevail more quickly is easy to explain. Procaine has been with us since as long ago as 1905 and a large amount of literature has been published about it during this period. For the research scientist there seems to be no more grass left in this particular meadow. There are many problems of more current interest that promise them greater personal renown. The pharmaceutical industry does not exist to serve the doctors but only to pursue its own lucrative aims. The doctor merely acts as intermediary for its products on their way to the end user, and he or she is thus its guarantee of profitability. It is therefore continually developing new specialties that can be sold profitably to patients by means of brisk publicity amongst members of the medical profession. It is therefore not interested in propaganda for so cheap a preparation with so broad a spectrum of indications. Procaine and lidocaine are available everywhere, even in the primeval forests of South America. If they were to be used not only for local anesthetics but also for a wide range of therapeutic purposes, this would have a substantial impact on the sale of profitable pharmaceutical preparations. It is therefore easy to conclude from this why and by whom the fight against a wider use of the Huneke therapy is being conducted with so much determination, and it is all the more to its credit that it has succeeded to so great an extent in becoming accepted, despite its total lack of financial backing.

The clinician is fully and profitably occupied in testing the latest preparations produced by the pharmaceutical industry. He or she feels obliged at all times to adapt his or her treatment to the "latest state of scientific knowledge." Those who occupy university chairs and those who work in the editorial departments of the specialist press are subject to the same pressures. General practitioners, however, can seek their therapy in reasonable independence from the flood of publicity and the currents of fashion. They ought also to have the courage and the liberty to free themselves from dogmas and seek new ways responsibly, sensibly, and with love for their fellow human beings, and gather fresh experience when the well-trodden paths fail to lead them to their goal. Many roads lead to Rome. Similarly, there are many ways of helping nature to help itself. More than this lies beyond the power of any doctor. This is how, for many of them, procaine therapy has become a fixed component of their diagnostic and therapeutic armory. The general practitioners do not talk a great deal about it, nor do the research scientists or the clinicians want to say more about it than they can help.

It has become a habit simply to talk about "neural therapy" when procaine or some other local anesthetic is used in treatment. The collective term "neural therapy" has been taken up uncritically by so many branches of medicine and the pharmaceutical industry that we attach great importance to the additional definition "according to Huneke," whenever we mean the selective, carefully pinpointed, specific treatment with local anesthetics. This is why K. R. von Roques originally coined the term "neural therapy according to Huneke." Even if far from perfect, it is now well established and there is no reason to consider changing it. We occasionally hear the objection that similar individual observations of the healing effects of local anesthetics were in fact made by others (Schleich, Spiess, Leriche) before the Huneke brothers. But the recognition of the biological laws involved and the far-reaching therapeutic importance of the action of procaine were and remain the intellectual property of the two brothers. They built their years of experience into a complete method and fought against considerable resistance for its recognition.

Following the Huneke brothers, a number of doctors have gained recognition for their work in providing a theoretical basis and a scientific foundation for the principles underlying this new form of therapy. But this does not entitle them to claim the right to propagate the method of the Huneke brothers practically unchanged under different names of their own invention, such as "therapeutic local anesthesia," "neurotopic therapy and diagnosis," "selective neuro-regulating sympathetic-system therapy," "regional pain therapy," and other such neologisms!

There cannot be many doctors who have not heard something of the successful cures achieved by neural therapy, some of which border on the miraculous, and who have not also tried it out for themselves, though generally without the expected success. Not everyone who injects procaine, Scandicaine, Xylocaine, Xyloneural, or any one of the mass of combined preparations covered by the comprehensive designation of neural-therapeutic products is, by virtue of that fact, practicing neural therapy! Neural-therapeutic preparations are, in reality, extremely demanding and can develop their remarkable effectiveness only if they are given in the right place for the specific patient who is being treated. The localization of the injection is crucial for success or failure. No two human beings are identical and there are therefore no two identical disorders. This is why the decisive point for the injection in 10 patients with the same diagnosis can be in 10 different places. Simple as it may seem at first sight, it is not as simple as saying: "From now on, simply take some procaine and cure practically anything, since in any case in some way or other everything goes via the nervous system!"

This book has been written in order to give the busy doctor of today the possibility of using this new experience and knowledge without first of all having to wade through and digest some 10 000 publications on this subject. It is intended to be no more than a guide to the theory and practice of neural therapy. It has been designed as a work of reference and is in three parts, to enable interested practitioners to orient themselves with a minimum of effort and to discover new suggestions whenever they use it in their day-to-day practice. For the sake of clarity, I have refrained from quoting too many case histories, from giving every name and from providing a complete bibliography. The three parts of the book are:

1. Theory and Practice of Neural Therapy According to Huneke.
2. Encyclopedia of Neural Therapy. The alphabetical list of indications is an extract from the enormous amount of literature on carefully localized therapy with products containing procaine or lidocaine, based mainly on segmental therapy. Practical suggestions take precedence over theoretical considerations. On the other hand, principles regarded as important are intentionally repeated, some of them more than once. This section dealing with indications makes no claim to completeness. But from what is stated in this part of the book, it will generally be possible to decide on the procedure to adopt for other disorders presenting in similar locations to those quoted.
   It is essential to emphasize again and again that segmental therapy has its limitations and that the lightning reaction forms the coveted summit of the diagnostic and therapeutic potential available to us. This is simply because it is the only possible way to cure a large number of hitherto therapy-resistant disorders caused by interference fields, because it is the only method that can cure them at their origin.
3. The Techniques of Neural Therapy. The suggested techniques have been grouped alphabetically and are in a section by themselves. This is done for practical reasons, in order to make it possible to locate the required information quickly. Techniques are described in considerable detail, and the sketches and illustrations are intended to make it easier to commit to memory the information provided.

My son, Mathias Dosch, has produced an illustrated *Atlas of Neural Therapy: with Local Anesthetics*, also published by Thieme. This atlas is designed as a complement to this manual.

There would have been no neural therapy according to Huneke if fate had not placed these new discoveries in the hands of two brothers with very different personalities that perfectly complemented each other. Ferdinand, the dynamic fighter, who went imperturbably

on his way despite all the forces arrayed against him, and who, time after time, drummed the new teaching with penetrating eloquence into the heads and hearts of his readers and his listeners. He was supported by Walter, the prudently deliberate, more profound; a complete scientist who remained more in the background and who provided the theoretical foundations for their observations, thus helping his brother to forge the weapons for their battles against a world full of opponents. Neither could have existed and prevailed without the other.

Ferdinand Huneke died of a pulmonary infarct on 2 June 1966, at the age of 74. His death bereft us of one of the very great physicians of our time. His life was a hard struggle, and almost the only recognition that he was to receive was the love, affection, and admiration of his disciples, whose faithfulness to him was to outlast his life. Ferdinand Huneke was a fascinating personality. As a passionate doctor he was so imbued with the tightness of his ideas that any resistance would rouse him to truly Teutonic fury. Much to the distress of those who supported him, he would often reply too directly, with too little tact, too noisily and heatedly to the numerous personal and often malicious attacks made on him. Thus, he made more enemies than was good for his cause. Many of his opponents made the mistake of identifying the inconvenient personage with his cause. But there were also a number of notable clinicians who learned to induce Huneke's lightning reaction, amongst them Ferdinand Hoff, who recognized his discovery for what it was without necessarily also adopting Huneke's philosophical views and conclusions as his own.

For patient and doctor the cure is the decisive element, whilst its interpretation must be left to the people of science. If science takes offense at the person of Huneke and at the packaging of his ideas, it ought not on that account refuse to accept the contents of the package. For we owe a genuine step forward to Huneke's gift of observation: "The ability simply of looking and thinking about what one has seen is what has characterized Hippocrates and other great physicians. In great fundamental questions it takes us further than many brilliant inventions in the form of refined technical aids or a vast lumber of knowledge" (Bier). As practicing doctors, we rarely have the skill to formulate our ideas as clearly and with the same precision as that possessed by many a fluent clinician practiced in discussion and debate. But a certain roughness of expression ought not to be any reason for avoiding all discussion with us. After all, we all serve the same aims, and with our observations of the reactions of the living organism to our injections, we complement animal experiments and research in the dead regions of science.

Walter Huneke died on 4 March 1974 at the age of 76. The recognition that the two brothers deserved was denied them both. The story of their neural therapy is a sorry chapter in the history of medicine. They stand with others like Semmelweiss, Spiess, and Schleich, all pioneers whose recognition was long delayed. Today everyone knows that they were right and that the "experts" who set themselves up in judgment over them and condemned them were wrong. We shall therefore continue the fight to put an end to the injustice done to the Huneke brothers and obtain for them, if only posthumously, the recognition they deserve. This book will help to ensure that their discoveries will remain alive.

I therefore dedicate this textbook to my venerated friends and teachers Ferdinand and Walter Huneke. It is due to them that the whole of my medical ideas and actions have acquired a new meaning. Without the art of healing that they taught me, and which I pass on to others out of my gratitude to them, I should no longer wish to be a doctor.

Von Hering prophesied in 1925: "The intelligent use of the autonomic system will one day become the most important part of the art of healing." The Huneke brothers have shown us an excellent way of using it wisely. In the interest of our patients, this is the way we have to choose. Any neural therapist proficient in his or her art will be superior to the best clinic equipped with the costliest and most complex diagnostic apparatus, particularly in the roughly 30% of all disorders which, in our experience, are caused by an interference field! Since localization and the correct technique are the essential prerequisites for success, may this book of mine offer counsel and suggestions to the ever-widening circle of doctors who are turning to neural therapy according to Huneke, that they may so perfect themselves that, from being "also procaine injectionists" they may become successful neural therapists in the sense of the Huneke brothers.

Peter Dosch, MD

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Part I
Theory and Practice of Neural Therapy According to Huneke

Introduction

Facts to Remember

1. Neural therapy according to Huneke is a regulating therapy, i.e., a holistic therapy. The healing stimulus produced by means of a correctly placed neural-therapeutic substance produces a response from the whole of the neurovegetative system whose pathways are those taken by both illness and recovery.
2. Segmental therapy according to Huneke refers to the selective use of procaine or lidocaine in the area of the disease process. Always examine first, then test! The improvement achieved with segmental treatment increases with repetition up to complete cure. If segmental treatment fails to produce an improvement, look for the interference field.
3. Any chronic ailment can be due to an interference field.
4. Any part of the body can become an interference field.
5. The injection of procaine or lidocaine, repeated as necessary, into the responsible interference field will cure the disorder caused by it, as far as this is anatomically still possible, by means of a lightning reaction (Huneke phenomenon).
   The conditions for a lightning reaction are:
   a. All disturbances remote-controlled from the interference field must disappear completely, as far as this is anatomically still possible, at the moment of the injection.
   b. Freedom from all symptoms must continue for at least 20 hours (8 hours in the case of teeth).
   c. If the disorder recurs, the injection(s) must be repeated, and the period of freedom from symptoms must clearly increase with every subsequent treatment. A Huneke phenomenon has been produced only if this criterion has been met.
6. If injection into the segment produces no substantial improvement, or injection into a suspected interference field does not produce a 100% lightning reaction, further injections at these sites are pointless.
7. Always try simple injections with small quantities of local anesthetic first, with few but well-placed injections. Injections into the sympathetic chain and the ganglia are our last resort. A doctor who wants to help his or her patient must also be familiar with these. Do not stop treatment until you have tried everything.
8. All suspect teeth must be tested in a single session, similarly all scars. All scars in the same segment must always be injected as part of any segmental treatment.
9. NOTE: Intra-arterial injections into a vessel leading to the brain or into the subarachnoid space can have serious consequences. Always protect your patient and yourself by prior aspiration.

Symbols Used in the Text

→ denotes that the key word following this sign is listed in the Alphabetical List of Conditions and Indications in Part II;
→ (T) denotes the key word following this sign is listed in alphabetical order in Part III, Techniques, where the technique for the injection may be found.

A
Teachings, Theories, Experiments, Terms, and Definitions

1 Chronological Survey

The intelligent use of the neurovegetative system will one day constitute the most important part of the art of medicine.
Von Hering, 1925

ca. 6000 BC–2000 BC If we can rely on tradition, those skilled in healing during neolithic times, at whose skull trepannings we are filled with admiration, are supposed to have jabbed sharp stone splinters into the skin of the sick in order to exert an influence upon the internal organs. Doubtless their activities were originally intended to enable the demon Pain to leave the body by the hole in the head or in the skin. We may assume that their unsophisticated senses also enabled them to observe genuine possibilities of cures, the knowledge of which they passed on.

ca. 3000 BC The beginnings of acupuncture are usually placed in this period, combining the empirical experiences of many generations into a formal body of teachings. Acupuncture recognizes skin channels and points that have special relationships to specific organs and systems.

1664 The British anatomist, Thomas Willis, was the first to describe the sympathetic chain.

1801 M. F. X. Bichat introduced the term "neurovegetative system."

1851 Claude Bernard described the neural regulation of the vasomotion.

1869 The Zurich ophthalmologist, J. F. Horner, described a symptom complex that was later named after him.

1883 The great Russian physiologist, Pavlov, laid the foundation of the teaching of "nervosism." He recognized the coordinating influence of the nervous system upon all organic functions. Incidentally, it was Pavlov who first used the term "holistic medicine."

1884 Koller demonstrated the anesthetizing effect of cocaine on the eye.

1886 Frank reported on the possibility of temporarily paralyzing the ganglia by means of cocaine.

1886 The German homeopath, Weihe, discovered, without any knowledge of acupuncture, that different diseases were accompanied by 195 constantly recurring painful skin areas and he assigned to each of these its specifically indicated homeopathic medicine. In fact, 135 of these points lie on Chinese acupuncture channels, and 105 of them coincide both as regards position and symptoms with traditional acupuncture points.

1892 Schleich propounded his "infiltration anesthesia" to a surgical congress, based on using a 0.1 % to 0.2 % cocaine solution. He ended by stating: "I therefore consider, with this harmless means available to us, that from any idealistic, moral, or penal point of view, it is no longer permissible to make use of general anesthesia with all its risks, where this means will in fact suffice." This produced a storm of indignation, no discussion was allowed. Instead, a vote was taken to determine who amongst the 800 surgeons present was convinced of the truth of Schleich's report. Not one of them voted in favor! Only 10 years later, Mikulicz obtained recognition for his method. Schleich infiltrated his solutions also for lumbago, rheumatic shoulder, and intercostal neuralgia, and was convinced "that multiple injections of my infiltration solutions are the best antineuralgic method that is available to us." But he was unable to convince the doctors of his time.

1898 Head published his *Sensory Disturbances of the Skin in Visceral Disease.*

1902 Spiess published *The Therapeutic Effect of Anesthetics* (*Die Heilwirkung der Anaesthetika*).

1903 Cathelin reported on epidural anesthesia with cocaine solutions.

1905 Einhorn discovered Novocaine (procaine).

1906 Spiess discovered that wounds and inflammatory processes subside more quickly and with fewer complications after anesthesia. From this he concluded that pain acts as a cause in enabling an inflammation to be-

come established. Despite the fact that his observations are of great therapeutic importance and that they are repeatable, his work failed to receive the recognition it deserved. As a result, Spiess became resigned in the face of the then current theories, which refused to recognize any neural influence on the inflammatory reaction. In Germany his work was forgotten, although it continued to exert its influence on Russian medicine (Speransky, Vishnevski).

1906 Vishnevski confirmed the effect of locally applied Novocaine in reducing inflammation.

1909 Sellheim and Laeven introduced paravertebral anesthesia.

1909 Cornelius published his *Massage of Nerve Points* (*Nervenpunkt-Massage*).

1910 Braun recommended procaine injections into the nerve-exit points in trigeminal neuralgia.

1912 Haertel described the techniques for injections to the Gasserian ganglion and into the sciatic nerve.

1913 Leriche first removed the stellate ganglion from a patient suffering from Raynaud disease.

1913 Paessler introduced the term "focal disorder." Gutzeit and Parade later defined a focus as a "seat of an inflammatory reaction containing bacteria and filled with toxic products, whose contents are more or less shut off by a living and thus reactive wall from the normal environment and which, as a result, sometimes have no connection with the organism and at other times are capable of passing out into the tissue planes." An attempt was made to explain the pathogenic action of such a sealed-off focus by the spread of living bacteria and the emission of toxins via the bloodstream causing an antigen–antibody reaction.

1917 Mackenzie reported on hypertonus and hyperalgesia in subcutaneous tissue and muscles in visceral disease.

1920 Leriche for the first time successfully treated migraine by Novocaine irrigation of the temporal artery.

1924 Ricker published *Pathology as a Science; Pathology of Related Structures* (*Pathologie als Naturwissenschaft. Relationspathologie*).

1925 The brothers Ferdinand and Walter Huneke rediscovered the therapeutic effect of local anesthetics, without any knowledge of the work of Schleich, Spiess, and Leriche. They introduced intra- and paravenous procaine therapy and investigated what conditions this new form of therapy could be applied to in conjunction with intracutaneous, subcutaneous, and intramuscular procaine infiltration.

1925 Leriche for the first time injected Novocaine into the stellate ganglion for therapeutic purposes and recognized the advantages of injection compared with surgery of the sympathetic chain. He described the injection of Novocaine as "the surgeon's bloodless knife."

1928 F. and W. Huneke reported on *Unfamiliar Remote Effects of Local Anesthetics* (*Unbekannte Fernwirkungen der Lokalanaesthesie*). In this work they already pointed out the importance of the injection site, since previously unknown reflexlike remote reactions could be produced in this way via Head's zones. They first called their therapy "therapeutic anesthesia" (*Heilanaesthesie*) and recommended it for the treatment of a wide variety of painful conditions and of trophic disturbances in the segmental area of the ailment. Kibler suggested the term "segmental therapy." Also in 1928, Bayer Leverkusen put on the market a procaine-caffeine preparation developed by the Huneke brothers for their new therapy, under the trade name Impletol.

1928 Leriche and Fontaine observed that fractures healed better and more quickly after procaine injections into the fracture line.

1934 Leriche observed that extensive post-operative pain disappeared "immediately" after procaine infiltration of the surgical scars. Unfortunately he failed to recognize the significance of this observation or he would doubtless have drawn therapeutic conclusions from it.

1935 Vishnevski published his method of injections to the sympathetic chain at the upper renal poles.

1936 Speransky published *A Basis for the Theory of Medicine* in New York.

1936 F. Huneke published *Disease and Cure: Another View* (*Krankheit und Heilung anders gesehen*).

1936 Bayer cured gastric ulcers by using a 0.25 % solution of the local anesthetic Larocain given per os and explained its effect "in the elimination of all kinds of dystrophic effects upon organs and tissues."

1937 Kulenkampff reported on "miraculous results" in the treatment of epididymitis with local anesthetics.

1938 Fenz and Falta published *On the Therapeutic Value of Novocaine Infiltration in Internal Medicine*

(*Ueber den therapeutischen Wert der Novocaininfiltration in der inneren Medizin*).

1938 Fenz reported on "remarkable results obtained with Novocaine injections in 143 cases of sciatica."

1938 Hansen and von Staa published *Reflectory and Algesic Disease Symptoms of Inner Organs* (*Reflektorische und algetische Krankheitszeichen innerer Organe*).

1938 Von Roques translated A. D. Speransky's *A Basis for the Theory of Medicine* into German.

1940 Ferdinand Huneke observed the first "lightning reaction" and immediately recognized its therapeutic importance. With remarkable vision he concluded from this that there are states of neural irritation (interference fields), which can set off and sustain a wide range of disease processes outside any segmental order. He found a way to eliminate these interference fields and thus to cure disorders that had previously proved resistant to therapy.

At the suggestion of von Roques, segmental therapy and the elimination of interference fields were combined under the term "neural therapy according to Huneke," the former being based on selective injections of procaine or some other suitable local anesthetic, the latter on the induction of the Huneke phenomenon (lightning reaction).

We regard Schleich, Spiess, and Leriche as predecessors of the Huneke brothers. Little attention was paid at the time to their separate observations and they were soon forgotten, so that a specific form of therapy would never have been developed from them. It is the historical achievement of the brothers Huneke that they made the same observations independently and, what is far more important, that they recognized their therapeutic significance. They spent their lives in continuing to explore and research the possibilities of using Impletol in many types of illnesses.

They demonstrated a number of new injection techniques and developed appropriate routes for the administration of local anesthetics in their therapy. They worked out dosage guidelines that differed from those laid down by surgeons. In addition to a number of astonishing therapeutic possibilities, their studies also led them to the discovery of certain laws, which they then published. In a stubborn battle they made certain that their teachings should not again be lost to mankind, as had happened to their precursors. Following in the footsteps of the Huneke brothers and encouraged by their example, a number of doctors have rendered a great service to basic research and to extending the use of neural therapy, amongst them such names as Braeucker, Dittmar, Gross, Kibler, and Siegen.

1942 Veil and Sturm published *Pathology of the Brain Stem* (*Pathologie des Stammhirns*). The authors regarded the diencephalon as the determinant point for all pathological processes.

1943 Kohlrausch published *The Massage of Hypertonic Muscular Zones* (*Massage muskulaerer hypertonischer Zonen*).

1944 Ognew first injected procaine into the internal carotid artery.

1944 Bykow published *The Cerebral Cortex and Inner Organs* (*Grosshirnrinde und innere Organe*).

1946 Stoehr discovered the terminal reticulum as the termination of the neurovegetative system, which divides ever more widely and more finely until the terminal network of fibrils finally surrounds every single cell with a neuroplasmatic reticulum. With this discovery he supplied a secure anatomical foundation for the empirical and experimentally based findings of F. Huneke, Ricker, and Speransky. All the fibers of the unimaginably fine syncytium would, if placed end to end, make up three times the distance from the Earth to the moon. Stoehr's discovery was later extended by studies under the electron microscope, which showed that the nerve terminals do not in fact end directly in the cell membrane but lie free in the intercellular fluid. Pischinger demonstrated how stimuli are further transmitted via the cell-environment system. "Every part of the body's internal organization forms a circle. Thus every part is both at the beginning and at the end" (Hippocrates).

1947 W. Scheidt published *The Autonomic System* (*Das vegetative System*). Scheidt took the view that the nerve fibrils do not form a rigid network of conduits, but are a mobile system of molecules that continues to form new pathways as required. These pathways he called conductive fiber rings. Differential electrical voltages resulting from any stimulus are compensated by means of these. He suspected that these conductive fiber rings do not decompose completely after they have restored the balance in such differential voltages. The total quantity of the remnants of these forms an "old-strata picture," which, as a matter of course, has a different appearance for every individual. This old-strata picture would thus form the material manifestation of the stimulus memory. It considerably influences the development of new conductive fiber rings, which it facilitates, impedes or guides in certain directions.

This theory explains why a first insult may only appear to fade away whilst in fact it remains in the background, ready to act as a predisposition to illness. The observation that an illness may persist even though its

focus has been eradicated prompted Scheidt to make a distinction between the terms "focus due to bacterial action" and "neural interference field."

The term "interference field" as used by Scheidt applies to all primarily and secondarily disturbed autonomic tissues. It can thus mean that the field is disturbed or that it causes a disturbance. The term "irritation center" introduced by D. Gross also has this double meaning with regard to an irritation, meaning both the center from which a stimulus emanates and one that is irritated. For the sake of greater clarity, Kibler no longer referred merely to hyperalgetic zones (HAZ) but drew a distinction between an active (i.e., disturbing) and a passive (disturbed) interference field. To put an end to this confusion, W. Huneke suggested that in future, reference should be made exclusively to an "interference field" (*Stoerfeld*), whenever we mean a disturbed region of tissues that is itself producing interference, i.e., is causing a remote disturbance elsewhere or is at least capable of doing so.

1948 Vishnevski published *The Novocaine Block as a Method of Influencing Tissue Trophism* (*Der Novocainblock als eine Methode der Einwirkung auf die Gewebetrophik*).

1948 Wiener founded a new interdisciplinary science with his book *Cybernetics or the Control and Transmission of Information in Living Organisms and Machines* (*Kybernetik oder die Regelung und Nachrichtenuebertragung in Lebewesen und Maschinen*). This provided a new approach in practically every branch of science (e.g., medicine, biology, bionics, philosophy, psychology, sociology, education, economics, mechanical engineering, machine technology) and served as the synthesis of all knowledge. Biocybernetics also furthered our understanding of the effects of a therapy that makes use of local anesthetics.

1949 Fleckenstein and Hardt published *The Mechanism of the Effects of Local Anesthesia* (*Der Wirkungsmechanismus der Lokalanaesthesie*).

1949 Nonnenbruch published *Bilateral Kidney Disease. Neuralpathological Considerations* (*Die doppelseitigen Nierenkrankheiten. Eine neuralpathologische Betrachtung*).

1949 Pendl described the presacral infiltration technique.

1950 Kibler published *Segmental Therapy* (*Segment-Therapie*).

1951 Selye's work on stress showed that the body always reacts to various stimuli, to damage and to stress, both physiological and psychological, in the same unspecific way, by means of the "adaptation syndrome" (alarm reaction, resistance phase, exhaustion phase). However, he saw this reaction merely as a response of the adreno-pituitary system. Although his research work has been fruitful enough, we find that Selye observed only a portion of the overall morbid processes and that he did so in too isolated and one-sided a manner.

1951 Ratschow tested neural therapy in 1011 cases. He obtained 441 cures, 427 substantial improvements and had only 143 failures, despite the fact that neither he nor any of his 12 assistants had any training or experience in the method. Fifty percent of the most varied types of painful conditions could be favorably influenced by means of the "usual therapeutic anesthesia" (segmental therapy). "When the injection was made into an ascertained Head's zone, the rate of enduring success was increased to 70%." "There is such a thing as the rapid and lasting disappearance of remote symptoms, especially those of a polyarthritic type, by injection into an accidentally discovered interference field!" "The existence of the lightning reaction can thus be regarded as proven fact, a matter of which we were by no means convinced when we began our investigations." Over a period of 12 months, Ratschow witnessed 72 lightning reactions. "This is a sufficient number to underline the great importance of F. Huneke's observations."

1951 Siegen: *The Theory and Practice of Neural Therapy using Impletol* (*Theorie und Praxis der Neuraltherapie mit Impletol*).

1951 Dicke and Leube published *Massage of Reflex Zones in Connective Tissue* (*Massage reflektorischer Zonen im Bindegewebe*).

1952 W. Huneke: *Impletol Therapy and other Neuraltherapeutic Methods* (*Impletoltherapie und andere neuraltherapeutische Verfahren*).

1953 Vogler and Krauss published *Treatment of the Periosteum* (*Periostbehandlung*).

1953 E. Schwamm introduced bolometer thermography. Areas that are non-responsive can be discovered through viscerocutaneous projection areas of foci or interference fields by measuring the skin temperature once before and once after sending a stress stimulus (cold, Impletol). Triggering the Huneke phenomenon produces a balance between the regional thermical asymmetries of the body halves. They objectively demonstrate the connection between the interference field (focus) and the circulatory disorder.

1955 Glaeser and Dalichow published *Segmental Massage* (*Segmentmassage*).

1961 F. Huneke: *The Lightning Reaction. A Physician's Testament* (*Das Sekundenphaenomen. Testament eines Arztes*).

1961 Pischinger succeeded in providing objective evidence on the lightning reaction by comparative hematological analysis and by the use of iodometry. His "environmental theory" (*Milieu-Theorie*) is based on the observation that there are no classic synapses for the special organ (parenchymatous) cells in the neurovegetative periphery, but that the entire basic autonomic system acts practically as "ubiquitous synapse." The omnipresent extracellular fluid (matrix) provides the transmission medium between the capillaries as well as the nerve endings and the cell membranes. This is a means to nourish and cleanse the cells and to transmit intercellular information. Only the unimpeded functioning of this interaction, which is based on a continuous successful response to all forms of environmental stimuli, allows the maintenance of health and internal balance (with tissue potential and cell respiration at the center). The interstitial fluid has to provide the optimal environment for the cell. Persisting disturbances in this peripheral regulating mechanism, the "cell-environment system," lead to instability, inflammation, interference fields, and ultimately chronic diseases.

It is the mission of the physician, through the use of biological means, to activate the body's defense system of the basic vital functions and this creates homeostasis. In a convincing and scientific way, Pischinger and his scholar and successor Kellner, proved that neural therapy according to Huneke could accomplish this mission. They discovered the function of the "nonspecific connective tissue." First, they had to create the foundation, the ability to measure the function and regulation of the body's defense mechanism. As a result, they discovered substance complexes that are the foundation of humoral regulation. The results of their efforts form the solid base for the understanding of neural-therapeutic phenomena, including the Huneke phenomenon, as well as other biological healing methods.

1987 H. Heine discovered the tissue substrate of acupuncture points in cutaneous neurovascular bundles that perforate the superficial fascia. They correlate with myofascial trigger points that Travell and Simons described in 1983; also with Head's pressure points described in 1893. The stimulation of these neural structures can produce a therapeutic effect. We address them through quaddle therapy.

1991 The German cellular physiologists Professor E. Neher and Dr. B. Sakmann received the Nobel Prize for medicine. They made the interstitial fluid (matrix) and the ion channels between cells visible. In addition, they were able to measure the ion flow, which provides exchange of information and regulating impulses. Thus, they provided new insights about the effects of neural therapy and local anesthesia.

2 Theoretical Principles

As regards a revision of pathology, the time has come for a revolution; it is ripe and ready, it has to start, all the more so since in this revolution we have nothing to lose but our chains.
A. D. Speransky

It is the particular aim of this book to provide the practitioner with the basis for using modern neural therapy and to show him or her what its possibilities are. Despite this objective, which is more oriented toward practical aspects, we shall not be able to dispense altogether with theory. All too often, we come across names in the literature on this subject, which occur again and again and with which one ought therefore to be familiar. We shall limit ourselves to the essentials and not take sides in the battles of the experts on the question of the extent to which the experiments quoted and the theories that have been based on these discoveries are founded on genuine knowledge or merely rely on interpretations. We, including our patients, cannot wait for the day when all the contradictory voices will sing in unison. Nor is it very likely that this will ever happen, for life will never surrender its last secrets.

The many illnesses with which we have to deal day by day are a form of the vital element that is reversible if one addresses oneself early enough to its characteristic signs or if one changes the reaction of the organism to it, for example, by reversing polarity. By this means it becomes possible to bring the pathologically modified living organism back to normality, i.e., to health, provided that it is still capable of repair. The practitioner who, in a manner of speaking, is fighting in the front line, is doubtless best served by a solidly based textbook or work of reference that does not make the complex relationships even more incomprehensible, but which shows him or her the common denominator(s) by which he or she can see the large number of symptoms in some semblance of order.

We rely upon what is known as neural (Ricker, Speransky, H. Heine), humoral (H. Heine, G. Keller, A. Pischinger), and regulating (Bergsmann, Perger) pathology as well as on biocybernetics (Wiener), which have become an important influence in modern medico-scientific attitudes. One might even say that they have conquered them. They have completely confirmed and provided the theoretical foundations for all the empirical findings made by the Huneke brothers, for they prove that the term we often use of a "disturbance in the autonomic equilibrium" is no mere invention in order to provide a working hypothesis, but is solidly based on clearly definable changes in the finest of innervated blood vessels and in nerve tissue, from the ganglia down to the last fibril acting on the cell environment of the individual cell.

For us, the teachings of Ricker, Pavlov, Speransky, Bykow, and Pischinger are only steps on the way to the recognition that there is a constant interchange of information from the periphery to the center and vice versa, which takes place along the pathways of the neurovegetative system that is present everywhere in the human body, down to the last cell. They help to confirm to us that the autonomic regulating mechanisms that control the automatic functions of breathing, circulation, metabolism, of hormonal, temperature, and fluid balance and a great deal more besides, all act along the same ramified pathways of this "vital nerve"; thus it is these these that—acting together with all the cells and organs as a whole—actually make life possible.

The brothers Huneke have made it clear to us that the healing action of physiotherapy, balneotherapy, and of other peripherally acting therapies such as acupuncture, Ponndorf vaccinations, massage, and all dermal stimulation and tonal therapy, including Kneipp's, shortwave, ultrasonic, and radiographic therapy, and even the effects of chirotherapy, are all ultimately based on a single common principle. They all make use of the reflex pathways of the neurovegetative system by setting up a therapeutic stimulus in the nervous system, whose response to this stimulus then releases the healing reaction. Seen in this light, all these therapies can also be considered to be "neural therapy" in the wider sense. It is the goal of this therapy to decrease and eliminate the formation and dissemination of pathological irritation through the use of local anesthesia.

With the application of the Huneke phenomenon, this takes place directly at the place of origin, and with segmental therapy it takes place in the peripheral dissemination segments. We disable the nociceptors and thus, prevent the increase of pain or the worsening of the disease. A great number of nociceptors (mechano, thermo, chemo etc. receptors) can be found in the skin,

joints, periosteum, the joint capsules, tendon insertions, pleura, peritoneum, vessels etc. With our injections, we are able to reach and disable these receptors at every level of depth allowing us to regulate effectively the disease-producing condition, to affect positively the cell environment, and to strengthen the defense mechanisms.

Seen in this light, neural therapy is a form of regulating therapy. We are able to understand regulating therapy in connection with local anesthesia only if we understand and recognize the cybernetic relationships and principles involved. For this reason, before taking a brief look at the historical background, we shall first concern ourselves with biocybernetics as seen from the currently accepted point of view. After this, our attempts to deal by means of a single local anesthetic with such a large number and variety of disorders presenting such apparently different symptoms will perhaps no longer seem like a form of magic, occultism, or simply the blinkered act of monomaniac outsiders.

3 Biocybernetics and Neural Therapy

Cybernetics constitutes the science of control and information, irrespective of whether we are dealing with living organisms or machines.
N. Wiener

In recent years cybernetics has conquered and fertilized almost every field of scientific research as a kind of "bridge between the sciences." It makes use of mathematical methods to study problems of regulation and control, and of information transmission and processing. The principles governing cybernetics apply both to machines and to living organisms. The far-reaching importance of feedback control circuits and of the cybernetic interaction of intermeshed networks of control circuits was recognized in 1948 by N. Wiener and published in his book *Kybernetik oder die Regelung und Nachrichtenuebertragung in Lebewesen und Maschinen* (*Cybernetics or the Control and Transmission of Information in Living Organisms and Machines*). He thus provided a name, a definition and a theory for this new science.

The physiologist R. Wagner, Munich, stated that "the first life existed when the first control circuit existed." The neurologist G. Walter used different words for the same idea: "Life began when in the primeval sea the first molecule was formed with the capacity for feedback." In the course of their development, living organisms have evolved a mass of techniques to ensure survival. These include temperature control, growth, procreation, and heredity. Humankind has studied these mechanisms and has to some extent copied them mechanically. In this (limited) sense, for example, aircraft imitate the flight of birds, the computer imitates the nervous system. The physiological regulating processes have been known for a long time in medicine and biology. But it was not until 1941 that H. Schmidt recognized regulation and control as a common principle both in technology and in the living organism, when he wrote: "In addition to finding regulating processes in technology, we find control mechanisms also in plants, in animals and in Humankind. The fundamental stability of body temperature, blood pressure and pulse rate in the human being, his ability to maintain his upright posture while standing or walking, and a large number of other constants all result from regulating processes."

However, the human being is not a simple energy-consuming machine with rigid mechanisms. Humans could rather be compared with modern computers that transform information rather than energy. The human organism has the advantage that it can work with a dynamic neural material, which is able to regenerate itself and form new connections based on information that benefits the whole. This puts it way ahead of the rigid connections of the most advanced computer system. A number of adaptable functional systems are always active in the human organism. They exchange information and, based on the feedback system, they locate, organize, store, and compare data, and are able to respond to their findings. The impulses have to be as short and clear as possible. The human nervous system has been able to find a way of solving the problem of coding, transmitting, and decoding that modern technology cannot copy completely. According to Vester, cybernetics is "the control and automatic regulation of interlinked and intermeshed processes at a minimum cost in terms of the amount of energy used," without which life would not be possible. Since medicine must concern itself like no other discipline with the biological control circuits in the living organism, it ought not to be unreasonable to expect it to be forced to concern itself more intensively than other disciplines with this higher-order science. Yet, this new line of thought is only beginning to make a little headway in medicine, and painfully slowly at that.

Medicine today prides itself on being based on strictly scientific principles. And yet, diagnosis, which forms its most important basis, seems intent only to look at symptoms and the superficial aspects, instead of concerning itself rather more with the human being as a cybernetically functioning systems complex, systems that respond to and affect his or her internal and external environment. For a symptom is simply the expression of a regulatory change or of a faulty control mechanism. Apparently, in its preoccupation with the study of inert building blocks, medicine seems to have almost forgotten that there is something beyond these that makes up life. To date, medicine has taken the oldest and most important functional basis provided by nature too little into account, namely the fact that organic structures work by means of control circuits that have evolved and proved themselves over millions of years.

Our specialized knowledge has become vast. There is no lack of facts. But there is a lack of synthesis of all this knowledge, a dearth of interconnected thinking that takes the natural laws of cybernetics more effectively into account. We can make progress only if we are able to turn away from analysis and the theorizing of the ivory-towered specialist toward a synthesis, by making the effort to think in more cybernetic terms about the laws on which the facts and events in and about us are based.

Cybernetics regards the human being as the most highly developed of all self-regulating dynamic systems in existence. In the human being, the principle of linear causality (i.e., the straight-line relationship between cause and effect), which is the basis of a purely mechanistic philosophy, no longer applies. Instead, the principle applicable to the human being is that of an intermeshed interactive causality. In any cybernetic system, every subsystem is continually linked to every other subsystem in a network of reciprocal relationships. Seen in this light, disease is a cybernetic problem, since it is the result of a disturbance of the regulating functions within the interacting structure of the self-regulating dynamic system that is the human being, and is due to malfunctions in the transmission and processing of information between individual control circuits within the overall system. Thus, it ought to be the physician's task to act upon these disturbed or faulty control systems in order to restore control and put the disturbed biological functions back into order.

Orthodox medicine insists stubbornly on the so-called "nature"-scientific, linear causality, and its effort to prove itself through randomized double-blind studies. Today, this effort compares with a retreat into old dilapidated bastions. Really, the double is a triple-blind study, where the researchers close their eyes to the reality of network processes in a live system. Biologic systems are not linear but connected in all directions and are subject to a steady state. Hence, there is a balance in which physical quantities do not change after adding energy. The systems are energetically open and able to exchange energy and matter with their environment.

The monocausal reasoning of Galilei, in which cause and effect are directly connected, does not suffice any longer. Thomas declared in 1984 that "it can no longer be considered a scientific effort when one-dimensional causal chains are applied to network systems." Progress cannot be denied. In 1935, Speransky finished his book *A Basis for the Theory of Medicine* with the statement that the time has come for a revolution in pathology where nothing can be lost but chains!

In our daily practice, the majority of patients come to us with a multiplicity of often vague symptoms that fit into no precise diagnostic pigeonhole. We neural therapists know from experience that many of these disturbances are set off by interference fields and foci. According to Kellner, an interference field is like chronic inflammatory material that cannot be removed or metabolized and that consists of the infiltration of lymphocytes and plasmocytes and of a disaggregation of the base substance. In the case of a focus, bacteria and their metabolic products are additionally involved in the pathological process. Both are sources of irritative stimuli, even if locally they produce only minor symptoms or none at all, and are therefore difficult to recognize for what they are. They continually emit interference signals, albeit only on a subliminal level, which produce stress on the control circuits. These signals are stored particularly by the cells of the ganglia and cause them to be irritated subliminally to such an extent that, when they receive any additional stimuli, they transmit excessive signals. Since the nervous system, whenever the next higher level becomes involved, excites (on the divergence principle) a number of neurons with every new signal, it becomes possible to understand how a minute interference field that, to all external appearances, is totally inactive, can have a negative effect on the whole of the organism and make it unstable. The response of the control circuits to a normal stimulus in such cases is already excessive. The organism works uneconomically and is therefore less efficient and less able to defend itself (Bergsmann, Kalcher). Superficially, the patient seems healthy. But when he or she comes under additional stress, symptoms appear. The stimulus threshold is lowered the longer the regulatory disturbances persist. Additional stress can trigger disorders in pathosensitive regions.

Many of the successes achieved by neural therapy, especially by the lightning reaction, become more readily understandable and can be explained only if they are seen in a cybernetic context. This obliges us to become familiar with the basis, principles, ideas, and definitions of this new branch of science.

a) The Organism as Homeostat

The living organism endeavors to keep certain body functions constant, such as metabolism, temperature, blood pressure, blood pH etc., i.e., the internal environment. Various specific receptors signal any departure from the required values and inform the control center, and this will normally correct such deviations. If the regulating system is overloaded, provision is available for switching over to other intact regulating systems or to bypass them until one is found capable of restoring the function in question to its ideal range. The neurovegetative system and the hormonal system connected to it regulate and control this homeostatic state and ensure that it is maintained. However, the compensating capacity is not unlimited and is lost if the organism is

subjected to an excessive influx of stimuli. It is our task to prevent an irreversible condition by interfering with pathogenic mechanisms that weaken the system through continuous stimuli. The intervention should take place at the primary site of stimulation (for example, the interference field) to restore homeostasis quickly and thoroughly.

b) The Economic Principle

Homeostasis can be maintained only if the organism is working economically. The task of the regulating and control systems is to adapt all the metabolic processes in accordance with economic principles to the demand at any given time, by the shortest route, in the shortest time, using a minimum of energy. The time taken by a system to change from one state of inertia to another is known in cybernetics as a "settling process." Any stimulus that produces a response in a control circuit thus also sets off a settling process. An intact control circuit reacting normally (in a "muted" manner) and functioning at optimum "control quality" with "negative feedback" is able to cope with this additional demand quickly and economically.

When there is a dysfunction in the control circuits, which may be due to any one of a number of causes, "periodic or aperiodic deviations" will occur in the control quality. These may be of several degrees of severity. In the case of labile (periodic) deviation, any stimulus will produce an excessive response. A short-period stimulus will produce a deviation from the initial energy at a steeper gradient and to a higher value. Similarly, the return to the initial value will also be excessive and require longer to settle down. In such a case any permanent stimulus will also produce an excessive response and the required value will be attained only after a longer settling time. This is known as regulatory lability in the patient.

In the case of a slow, sluggish (aperiodic) deviation any stimulus is delayed and the response to it is slow. Clinically, we then have regulatory sluggishness or paralysis. The initial value is reached slowly or not at all in the case of short-period stimuli, and an adequate value in response to permanent stimuli is not reached at all or only very late. In both these types of deviation of control systems, time and energy are wasted in responding to stimuli, and thus the principle of economy and of homeostasis is upset.

The consequence of all this is that under stress or as a result of the effect of noxious stimuli, ever more energy is required. Only a well-functioning regulating system can cover this additional demand quickly and economically. A disturbed system works more slowly and wastes more energy, and the effort required of it for work or defense is therefore produced less economically. The available spare capacity is correspondingly reduced.

c) The Control-Circuit Principle

Of the three basic principles of cybernetics, i.e., information, automation, and control, the last is of particular interest to us. In the living organism, all regulatory processes that serve the maintenance of the biological equilibrium take place automatically. This occurs via control circuits that have the purpose of providing stability for the dynamic system. We are all familiar with the reflex arc. The control circuit takes us one step further: it closes at the periphery, which forms a closed information circuit. "Feedback" is considered the ability to compare continuously the status quo with the (variable) goal. The continuation of a process depends on the evaluation of the status quo. This requires the incessant activity of control systems that compare the effective value with the required value. They adapt to the individual situation through corrections that correspond with the goal. Let us take a closer look at a control circuit in Figure 1.**1**.

A control circuit (1) is a self-regulating closed circuit. It owes its automatic capability to a feedback system. Its function is to keep the regulating value (2) or range (e.g., hormonal balance, body temperature) within permissible limits and following a disturbance to bring the system back to this range. It is helped in this by a regulator (3), which compares the effective measured value with the required or nominal value and thus acts as control center. A higher-order transmitter for the required control values (4) specifies the values the regulator has to maintain. These values

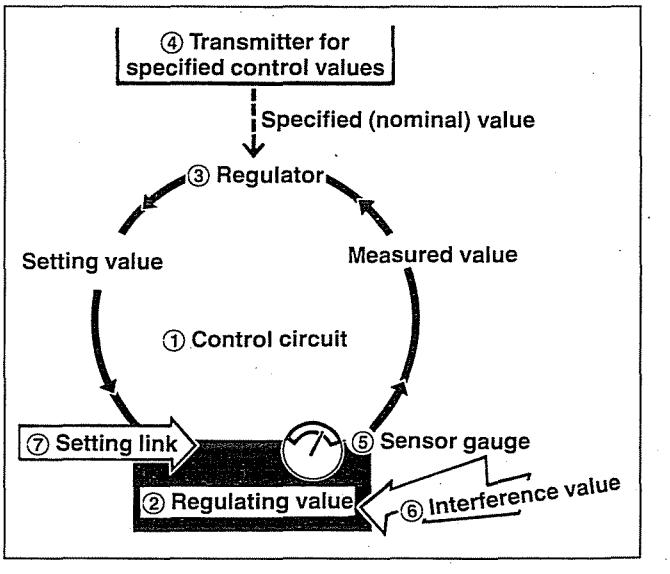


Fig. 1.1 **Simple control circuit with the principal standard components.**

can be variable, for example, if they happen to be the control values for other circuits. A control circuit never works in isolation, it always forms part of one or more interacting systems of several mutually interlinked control circuits whose required values are interdependent. They are thus able to maintain homeostasis and uphold the principle of economy. They are linked to one another for the continual exchange of information.

If the regulator becomes aware via its sensor gauge (5) of any departure from the specified value, a state that arises if an interference factor having a given interference value (6) alters the normal state from outside, the regulator has to take over to return the effective value to that specified. It makes this correction by transmitting control signals (setting value) to the setting link (7) in order to effect the necessary changes. If the sensor gauge measures too high a value, this is reduced by means of the setting value, if it is too low, the setting is increased. This system, which inverts the "mathematical sign" for the relative values of input (sensor gauge) and output (setting link), is known as negative feedback, since every change at the output end acts inversely on the input. Success and failure of any countermeasures taken are recorded by the sensor gauge and this information is then again fed into the control circuit. The system thus always couples back on itself. If the mathematical inversion is missing, the system works by "positive feedback." In that case it acts not as a regulator but as an amplifier circuit.

A practical example of negative feedback as used in technology is familiar to everyone and will help to illustrate this. The outside temperature is low (interference value) and the sitting room is too cold (thermometer = sensor gauge). The thermostat (regulator) closes the circuit, the burner heats the boiler (setting link). The room is heated to the preset temperature (required value). When this temperature has been reached, the sensor gauge signals this to the regulator (thermostat), which switches off the setting link (burner) by breaking the circuit. When the temperature drops again, the whole process is repeated automatically.

Another example from biology: the blood, a regulating value that must be kept constant, contains too much carbon dioxide (interference value). The receptors of the sensor gauge become aware of this and signal the fact to the respiratory center (regulator). This activates the respiratory muscles (setting link), which reduce the carbon dioxide content by increasing their activity. Once the required value has been reached, the signals of the sensors are switched off and breathing is reduced. Every biological control circuit has a large number of sensor gauges that, on the one hand, monitor the physiological processes by acting as proprioceptors and, on the other, signal any threatened or actual damage by acting as nociceptors or pain receptors.

Our entire nervous system forms an unbelievably complicated control circuit. Information travels constantly through the afferent pathways to the center. Corrective orders with the purpose of maintaining homeostasis travel back on the efferent pathways. The returning information will show if the corrective stimuli were adequate. It is hard enough to imagine what takes place (Pischinger) in the interstitial fluid, the cell membrane, and inside the cell during the basic autonomic regulation, to imagine the responses to stimuli that take place to ensure vital functionality. The effort of 40 trillion nerve cells handling the information and regulation exchange in the human organism is beyond our imagination. What a dynamic information service that must be established to enable life! Information has to be gathered, tested, and processed. Virtually every cell sends information that is amplified or inhibited on its pathway to the brain where an impression of the current overall situation is formed. At special receptor sites, information is also gathered about internal and external noxious stimuli, as a consequence, instructions are immediately sent to inhibit these stimuli, to deflect them into harmless channels, or to limit the damage. It is a miracle that we usually take for granted instead of wondering about it.

d) Biocybernetics and its Theoretical and Practical Applications in Medicine

To summarize briefly: cybernetics has evolved a method that proves that despite specific differences, all physical, physiological, and psychic processes are subject to uniform laws. These laws apply to both living and inanimate matter. Living organisms and self-regulating robot equipment such as the computer are based on identical principles of control, coordination, and regulation. They also make use of the same kind of economical feedback mechanisms in which a part of the output energy is returned with inversed polarity to the input side. This also applies to the physiology of the highly complex nervous system, in which there is likewise a continual process of checking and correction of the organs at the end of the line. This is achieved by continual reciprocal action between center and periphery.

Disease symptoms, with very few exceptions, can be regarded as regulatory disturbances and can thus be seen to be a biocybernetic problem. Obviously, as has been stated, these mechanisms play as important a part in restoring disturbed functions to normal as they have in the pathogenic process. In other words: disease is the consequence of a persistent disturbance of the information and feedback mechanisms. It calls for methods of treatment that will be most successful if they can attack the disease that has come into being, at

the point of the disturbance itself, i.e., if they can act directly on the cause. A number of the methods of empirical medicine nowadays explain the way in which they act, by reference to the basic autonomic regulating system (Pischinger) and to cybernetics. By this means, Bayr attempted to interpret homeopathy as a corrective signal effect on the regulating system.

e) Neural Therapy as Regulating Therapy

In the context of neural therapy we are primarily interested in any disturbance affecting the control circuits and control complexes, and in any deterioration in the quality of control and regulation resulting from the influence of outside energy. Seen cybernetically, a focus or interference field is a point of disturbance from which subliminal signals are constantly being emitted at different intensities and frequencies. These signals are stored in the control circuits and put into a pre-excited state. In the first phase this produces periodic deterioration from the "standard" quality of control and regulation, accompanied by an excessive response to stimuli and, if it continues over a lengthy period, exhaustion of the control and regulating systems by aperiodic deterioration and sluggishness of the regulating processes, which may end up in a state of total regulatory paralysis. By means of neural therapy or surgery such interference fields (points of disturbance) can be eliminated and normal conditions of regulation restored.

We owe to Bergsmann the objective evidence on neural therapy according to Huneke, obtained by means of regulatory physiology. As a pulmonologist, Bergsmann collaborated with the manipulative therapist Eder in the study from a cybernetic viewpoint of the effects of neural therapy, acupuncture, and manipulative therapy on functional disorders of the thorax. The various forms of treatment investigated were shown to be different in degree but similar in their ultimate effect. Bergsmann was also the first to prove that the organism's economic balance is restored after successful neural therapy. He wrote that:

> Regulatory instability interferes with the economic principle and requires a disproportionate amount of effort for every task to be performed, due to overreaction by the organism. This results in overstrain, premature tiredness and delayed recovery. Our investigations showed that any correctly used form of regulating therapy, such as the eradication of foci, neural therapy, acupuncture and chirotherapy will increase ergometric performance and reduce recovery time.

Bergsmann's studies showed that focus and interference field form a permanent source of irritation, which places a strain on the regulating system and thus forces the organism to continual compensation. The latent regulatory disturbances do not yet manifest themselves clinically. But the system is unstable and tends to overreact in its countermeasures. The defensive capacity drops to the point where infections of all kinds can become established more easily. Any additional, often banal endogenous or exogenous stimulus (additive stress) may set off an inappropriate regulatory response that can then appear as an illness once the tolerance threshold is passed. This illness will break out sooner or later, depending on the intensity and the degree of instability (time factor). Bergsmann showed how susceptible a system sensitized by an interference field can be and how excessively it can then react. The blood supply can become unstable to such an extent that the slightest contact of a cottonwool wisp on the skin can be enough to set off a circulatory disturbance, which will show on a rheograph (vasal quadrant reaction). Once the interference field is eliminated, this abnormal reaction will cease immediately and become normal again.

Foci and interference fields can also influence any therapy by regulatory disturbances. In other words, a specific therapy can be used successfully only once this cause is eliminated. Similarly, the course of an illness can also be changed by the presence of interference fields. Chronic illness, on the other hand, can in turn favor the development of foci or interference fields. It was also shown that tuberculosis will occur with 87 % probability on the side already subjected to stress by a unilateral interference field. Depending on the magnitude of the stimulus and of acquired or hereditary instability of the control circuits, the segment, the quadrant, the whole side, or a region completely outside any apparent relationship will be affected by the illness.

Neural therapy using local anesthetics has a direct effect on the regulating system, which can be adequately explaned and demonstrated, and therefore confidently regarded as an important part of the medicine of the future. In segmental therapy, we achieve the temporary interruption of pain by means of a local anesthetic at the site of the disturbance. The local anesthetic acts on the cell membranes and also repolarizes cell membranes depolarized by the irritative stimuli. As a result, the feedback between pain and blood supply is broken and the response to the stimulus ceases to be excessive. Further, the hypersensitive, unstable systems working uneconomically are restabilized and their functions normalized. Circuits that have previously been out of tune with one another are again able to work together harmoniously and no longer disturb each other. In this way, not only is pain eradicated well beyond the period that the anesthetic remains active, but inflammatory and degenerative processes can also be healed by this means. With the improved reactive state a new starting position is created.

In the lightning reaction, the laws governing the mutually intermeshed control circuits can be seen even more clearly. According to Pischinger, the first interference-field reactions occur in the cell-environment system. In this, too, the processes run within a closed circuit with feedback. The interference-field effect changes the cell environment in such a way that higher-order neural, hormonal, humoral, psychological, and cellular control systems can also become involved. This explains the diffusion over such large areas of the body of interference signals from what seem to be insignificantly small scars, foreign bodies etc., often to organs in remote locations and finally over the entire organism. In the lightning reaction, these interference signals are extinguished. The additional stimuli again acquire only their normal, ordinary importance and lose their pathogenic powers and effect. In a flash, a chain reaction takes place throughout every single control circuit involved and this immediately readjusts all the required values to one another. There is no better explanation for the sudden, deep-seated change that occurs and that enables the self-healing powers of the organism to become effective again.

4 Ricker's Pathology of Related Structures

Pathology deals with the area where the strongest stimuli take effect.
Ricker

As early as 1905, Ricker's animal experiments led him to the conclusion that the influence of the nervous system on the finest blood vessels, on the capillary bed, must stand at the beginning of every physiological and pathological event. He called his teachings "relative pathology," since he wanted to prove by his theory how every cell is in a dependent relationship to the whole of the organism, that these relationships follow the time sequence nerve→blood vessel (tissue, and that these three components are constantly influencing one another. Neural reactions are faster than physiochemical reactions, but they act on the latter as triggers and as a determinant influence. It is remarkable that he discovered these relationships without having access to the anatomical discoveries made later (P. Stoehr, Jr.) of the extent and ramifications of the autonomic nervous system.

According to Ricker, any change in the capillary bed and the changes in the tissues, fluids, and cells, which in turn depend on these, are more dependent on the magnitude of the chemical, physical, or other type of stimulus than on its quality. The capillary bed consists of arteriole, capillary, and venule and, as we know from Stoehr, is innervated by the terminal neuroreticulum, which thus controls vasoconstriction and dilatation.

Ricker's "three-stage law" states that there is an identical mandatory mechanism of disturbed vascular activity that forms the basis of any local circulatory disturbance, but that this mechanism acts in several gradually escalating stages:

1. Weak stimuli produce vasodilation and acceleration of the circulation (hyperemia).
2. Medium-strength stimuli lead to vasoconstriction to the point of ischemia, and finally, by paralysis of the constrictors, to capillary dilatation and a slowing down of the circulation (prestasis).
3. Strong stimuli cause red stasis, with the formation of inflammatory exudate and the extrusion of red and white blood cells, in most cases leading to necrosis or abscess formation.

In Ricker's view, every pathological bacterial colonization must be preceded by an alteration in the blood flow, accompanied by neurocirculatory tissue changes that must first prepare the substrate for the bacteria. According to this, it is never the bacteria that initiate an illness, but first of all there must be a corresponding disturbance in the autonomic system. When we get cold, get wet feet, start to sneeze, get a sore throat, and then due to the "cold" we get catarrh, angina, earache, bronchitis, or cystopyelitis, we usually hold bacteria and viruses responsible and fight them with the proper medication. And yet, pathogenic agents are always in and around us. They only make us sick if our reactive ability has changed and the tissue is damaged by the environment and, thus, its defensive abilities are weakened.

Ricker dissociated himself quite specifically from Virchow's then generally current and accepted cellular pathology, as he also did from humoral pathology. He rejected any attempt to make the cell, the tissue fluids, or even the nervous system the central consideration in isolation. For him, all decisive physiological and pathological processes occur in the innervated terminal reticulum interposed in the circuit between nerve and cell:

> Against the principle of the cellular theory, according to which the cell receiving a stimulus functions automatically, feeds itself automatically and multiplies automatically, a principle which has resulted in neglecting the behavior of the blood and of the nervous system, we set the view based on observation but which needs to be further developed, namely that all the manifold cell and tissue processes are in a causal relationship with the blood, the reticular system and the rest of the nervous system, of which the neural processes are the first—in time, not in importance—running their course in a variety of ways which depend on the type of cellular or tissue processes involved, and also producing macro- and micro-anatomical changes. (Ricker)

The idea of a "local" disorder thus cannot continue to be upheld. Even a pinprick influences the central nervous system and thus the entire organism. By a summation of subliminal stimuli, a general effect on the vasculature can be induced. Ricker also found that local circulatory disturbances can be set off by reflex action from any other part of the body. Even though he concentrated his investigations primarily on the effects of

neural stimuli upon the periphery, he in no way overlooked the influence of the central nervous system on any trophic and dystrophic processes occurring in the organism in accordance with his three-stage law. For him, as also for Speransky, the part played by the neurovegetative system was a decisive one.

Any unphysiological stimulus that acts long enough and strongly enough will always set off identical initial reactions that depend on its quantitative character. This stimulus is transmitted via the perivascular network and the terminal reticulum (Stoehr, Jr.) directly to the circulation. Moderate stimuli produce a spastic ischemia that still remains within the physiological limits. Strong alarm stimuli and stimuli of long duration can lead to hypostatic hyperemia within a few minutes. This is already a pathological state characterized by the elimination of any response to vasoconstrictor stimuli. This "red stasis" initiates damage to the walls of the fine vessels. They become friable and permeable, so that red and white corpuscles can escape. Finally, it leads to necrotic tissue disintegration or abscess formation. This "neurocirculatory" syndrome naturally also affects the blood picture, serum level, temperature regulation, the acid-base exchange, water metabolism, and other physiochemical constants.

H. Siegen, one of the earliest notable followers of F. Huneke, deserves our special gratitude for his studies, in collaboration with other scientists, on the action of well-positioned procaine injections on the initial reaction in response to a strong stimulus as described by Ricker. In animal experiments he was able to prove:

a. The infiltrated procaine shields the tissues from the alarm stimulus and substantially improves the vasomotor stability of the small vessels, thus clearly raising the tissue resistance. The damaging phase of "red stasis," which regularly occurred in untreated animals could be reliably prevented under the protection of procaine (Plester).
b. If the phase of stasis had already been reached, i.e., if the condition had advanced to a stage that is usually irreversible for the organism, the innervation of the vessels could be re-established with procaine. The usual effects of damage to the vascular walls, including necrosis, could be suppressed (Gross, Schneider).
c. In the Shwartzman–Sanarelli phenomenon, the classic allergy model, it was possible to prevent necrosis, the "damaging allergic tissue shock," if before the intravenous second injection procaine was infiltrated in the area of the intracutaneous first injection. In animal experiments, procaine is thus able to erase the first insult so thoroughly from the stimulus memory that the second insult or trigger factor (Speransky), which would otherwise become pathogenic, remains ineffective. This proves that the "antigen–antibody reaction" cannot be solely the result of humoral sensitization, but that these processes are also neurally controlled and that it is possible to inhibit them with procaine injections at the site of the primary stimulus via the autonomic nervous system (Hirsch, Keil, Muschaweck). We shall return to this point elsewhere.

5 The Russian School: Pavlov, Speransky, Vishnevski, Bykow, etc.

Quidquit fit nervaliter fit (Whatever is done, it is done via the nerves).
Lange

a) I. P. Pavlov

Around 1883, the brilliant physiologist, I. P. Pavlov, further developed the teachings of Setchenov and Botkin. He stated that the nervous system plays a leading part in all physiological processes. In recommending that physiologists should in future concentrate on "extending the influence of the nervous system to as many functions of the organism as possible" he pointed the way in a new and promising direction. Before him, physiologists had regarded the organism as being separate from the conditions of its environment and the whole psychological aspect was similarly kept distinct from the field of physiological observations. Pavlov proved that only the nervous system holds together the many parts of the organism as a viable whole and creates the organism's oneness with its environment. To do so, sensory nerves supply it with impressions of the environment. The purposeful regulation of all vital processes is produced by reflexes via the cerebral cortex and the subcortical ganglia, and beyond these via the whole autonomic nervous system. Every biological process can be disturbed, modified, or inhibited by this system. It is therefore due to Pavlov that we have obtained new insights into the way the living organism functions, beginning with the elementary functions of stimuli, the excitability of living tissue and its ability to act as a conductor, extending to the highest of all the vital expressions of the organism, its psychological functions.

In 1904, Pavlov received the Nobel Prize for his work on the physiology of the digestive glands. His method of studying physiological functions over lengthy periods by observing largely intact and healthy animals led him to understand the internal mechanism of the neural control of digestive activity. His teachings on conditioned reflexes show that conditioned-reflex activity is an adaptation of the whole organism to constantly changing environmental conditions. These experiments finally led Pavlov and his followers into new areas of research, to the study of the physiology of the cerebral cortex and thus to the theory of cerebral activity, which has become one of the foundations of modern medicine:

> I. P. Pavlov observed cerebral activity in its constant movement and development and assumed that the basic processes in the cerebral cortex (excitation and inhibition) are constantly influencing each other. This led to his ideas on the dynamic reciprocal relationships between the cerebral cortex and the nearest subcortical centers, on the reciprocal relations between the first and second signal systems in the human being, on the analytical and synthesizing activity of the cerebral cortex, on the diffusion and concentration of excitatory and inhibitory processes, on the processes of reciprocal induction, and on the movement and development of the basic nervous processes, which are constantly influencing and conditioning each other. (Bykow and Kurzin)

Pavlov himself stated that "the theory of reflex action is founded on the three basic principles of exact scientific research":

a. the principle of determinism, i.e., that there is an initial impetus or cause for any given effect;
b. the principle of analysis and synthesis, i.e., the primary separation of the whole into its component parts or units, and thence the progressive fitting together again of the whole from these units or elements; and finally
c. the principle of structural form, i.e., of arranging the effective forces in space and linking together the dynamic elements within the structure.

Thus, every function, including those of the brain, is brought about by stimuli. The cerebral cortex is the paramount organ for regulating these functions. It constantly analyzes and synthesizes all stimuli impinging on the receptor-nerve equipment of the internal and external receptor. This process occurs in a uniform manner, in a continual and reciprocal relationship, and is mutually conditioned. Cerebral activity thus takes place as a reflex and is tied to the cells of the cerebral cortex. The continual reciprocal relationship of the organism with its environment ensures that brain function is being continually further developed.

b) Speransky's Neural Pathology

Speransky succeeded in elucidating the most complex problems in pathology by accurate experimental analysis. Based on the results of extremely wide-ranging animal experiments he established a number of important theses on the part played by the nervous system in the initiation, development, and course taken by pathological processes. These made it possible for the ideas of nervosism to be taken up by and penetrate into pathology and clinical medicine. According to Speransky, the nervous system controls all the processes that determine the metabolic reactions in every cell and in every organ throughout the organism. Every disturbance of the normal functioning of the nervous system must thus result in the development of disturbances of trophic processes in the cells and organs and hence produce neural dystrophies.

According to Speransky, the nervous system is where, as a matter of course, any stimulus must always attack. This harbors no processes that can occur in isolation from one another. For him the whole of the nervous system is an absolutely closed entity that always reacts to any stimulus as an entity. Any deviation in the nervous system is essentially irreversible. In every case it remains effective for a much longer period and much more extensively than had been previously believed. Every part of the nervous system influences the state of all the cells in the organism and, in doing so, largely determines the intensity of the biochemical reactions that occur in them. His main thesis stated that "stimulation of any portion of the peripheral or central nervous system can become the starting point for processes having a neurotrophic character and induce functional and organic changes."

He considered the spread of stimuli in the nervous system to be a general principle in the pathological process: "disease is the response of the organism to stimuli under the primary influence of the nervous system." All local pathological reactions occur only as a consequence of a general reaction of the entire nervous system. In this, there is first of all the reaction of the organism to the most varied stimuli, and this is identical even in the remotest areas of the body.

The quantitative aspect of the stimulus is always far more important in this than its quality. In other words, it is essentially irrelevant whether such stimuli are chemical, mechanical, thermal, or bacterial. In the original sense of the word, bacteria also act as purely causative elements, i.e., like a starter motor that sets the nervous system in motion. In the beginning, the bacteria initiate the morbid process; later they merely act as indicators.

The best-known of Speransky's animal experiments were those made to produce convulsions, by freezing limited areas of the cerebrum and producing stimuli by pressure on the hypothalamus by means of glass rings, and the reaction to croton-oil dental fillings and other peripheral stimuli. In these, he made a number of observations of considerable significance for us:

a. The stimulus that sets off an illness can start at any point. At that point it may become a "focus," which, after a certain time, can produce a reversal of the entire autonomic nervous system. The autonomic tonus can ultimately be changed to such an extent that it can make it possible for "neurodystrophic processes" completely different from one another to become established, e.g., peptic ulcer, pulmonary hemorrhage, dental decay, corneal ulcer, loss of hair, appendicitis, sinusitis, or gingival changes typical of scurvy or periodontosis. The stronger the stimulus, the greater and more superficial the destruction; the weaker the stimulus, the deeper the pathogenic effect.
   Incidentally, Speransky regarded the term "dystrophic" as meaning more than merely "nutritive," namely as signifying the sum of all regulating impulses. He showed that stimuli determined from central control points can also play a decisive part. The whole autonomic process is thus purposefully coordinated in the diencephalon, more precisely in the hypothalamus, as much in times of illness as of health. All stimuli are fed through this central relay station before passing via the sympathetic nervous system back to the periphery. There they produce tissue reactions, first within the segment of the peripheral stimulus and later also in the corresponding contralateral or other more remote segments of the body.
b. During the initial period the stimulus can be extinguished at its starting point. When this is done, the secondary symptoms will also disappear.
c. However, if a certain stimulus threshold has been exceeded and the pathological process is under way, it can become "autonomous" and proceed independently from the initial "focus," automatically and in constantly repeating cycles. From that time onward, it is no longer possible to separate the initial impetus from the process itself. Even the surgical removal of the focus, which would have helped up to this point, will no longer help now. From now on, the nervous system alone organizes the illness.
   Before Speransky's publications, the importance of the time factor had never been so clearly brought out. After the hypothalamus had been stimulated with a glass ring, the neurodystrophic reactions occurred within hours or a few days at most. He obtained similarly deep-seated changes in the nervous system by the injection of croton oil into the cervical ganglia and with dental fillings containing croton oil. The more peripherally the stimulus was applied, the greater was the interval between

excitation and the appearance of illness (alveolar pyorrhea, keratitis, red infarction of the lung, of the stomach, or large intestine, etc.). The "neurodystrophic standard syndrome" then occurred after a period of latency without apparent symptoms, 1 to 3 months later. If one disregards the time factor, one could easily overlook the causal relationship between croton-oil dental fillings and intestinal bleeding several months afterward. This can certainly be accepted as applying also to human beings and demonstrates to us the often serious late sequelae of the devitalization of a dental nerve in conservative dental treatment. Here, too, the causal relationship with disorders occurring much later and due to an interference field or focus formed by this treatment is only very rarely recognized.

d. The reactions of the animals to the noxious stimuli were totally different from one individual to another: some died, others recovered completely, and some remained completely free from any reaction. Speransky concluded from this that "the stimulus threshold is not a constant value, but is variable according to the individual and the time in question. It depends on the individual's initial autonomic state."

e. The "sensitization," as the change in the excitability of the autonomic nervous system is called, which starts from a "focus" (we now make a clearer distinction between a bacterial, disseminating focus and a neural interference field), can stay quietly lodged for months or even years in the stimulus memory of the autonomic system. Any new stimulus can then act as "second insult" or trigger factor and thus allow a previously latent disease entity to manifest itself. Thus, the relapse mechanism can also be explained by this means: a relapse can be set off by stimuli to various central and peripheral nerve zones if the stimulus memory has retained traces of an earlier pathological process. In such a case the trigger factor, by a summation of the noxious stimuli stemming from the imprints or residues of these past pathological processes, can set off a reaction, the form of which corresponds to the primary stimulus.

   The following is an example of this: an injection of a small quantity of tetanus toxin produces local tetanus symptoms in the homolateral extremity. Approximately 20–25 days after all pathological symptoms have disappeared, a glass sphere is implanted in the animal, in the region of the sella turcica. The irritation this produces in the hypothalamus will normally produce a complex of dystrophic processes in a number of different organs. But in this case, 24 hours after the operation, tetanus symptoms appear, which increase in intensity and finally lead to the animal's death. In other words, it dies of "tetanus" although there has not been any new bacterial infection. What is of importance here is not therefore the pathogenic agent but the stimulus, the reaction of the nervous system to the specific stimulus.

f. Speransky has also become famous for the results he obtained with his → (T) CSF pump. By means of this mechanical, unspecific brain stimulus, he was able to impose a far-reaching central nervous change in the organism. With this it is possible to eliminate either temporarily or permanently certain pathological processes that have already begun. If the body has lost its ability to react normally to the stimulus of certain therapeutic products (e. g., quinine in malaria, Salvarsan in syphilis, salicylic acid in rheumatic conditions), this ability is restored by means of the additional counter-irritant stimulus produced by the CSF pump. The medicament remains the same but the reactivity of the object on which the healing stimulus acts is so altered that it regains its ability to react normally to proven medicines. The CSF pump breaks through the blood–brain barrier, which normally prevents drugs from reaching the cerebrospinal fluid from the general circulation. The German, Reid, found a way for procaine to overcome the blood–brain barrier by injection directly into the cerebral → (T) cistern.

   Whether or not the cerebral massage provided by the CSF pump represents a substantial additional curative stimulus can only be determined by large-scale clinical investigations. It may well be that a disorder that has become autonomous will again prove amenable to procaine at the original site of the interference field after one or more treatments with the CSF pump and that this powerful jolt to the neurovegetative system will make possible a more deep-seated reorientation of the organism than Ponndorf's vaccination, fever therapy, hot baths, shortwave therapy, and all the other reversant methods.

The results, conclusions and teachings of Ricker and Speransky agree in the most important points. The theses they set up and that provide a substantial part of the theoretical basis of neural therapy have not remained uncontested. What teachings in medicine can boast that they have been accepted without contradiction? After Speransky had left the Soviet Union, he published his book, *A Basis for the Theory of Medicine* in 1936 in the United States. For a long time, his work was severely criticized and attacked, not only in Russia. Ritter and Reitter have repeated Speransky's experiments on dogs, but on a very much smaller scale. They also observed the neurodystonic processes that he had reported, but interpreted them as the result of an infection with *Leptospira canicola*. Meanwhile, Reilly and Tardieu have repeated Speransky's experiments on

guinea pigs and cats and have fully confirmed his observations. A work published in the Soviet Union in 1960 by the Pavlov disciples Bykow and Kurzin, on "corticovisceral pathology" again gives full credit and recognition to Speransky's work as the scientific basis for their own work. These two authors merely complain that Speransky did not take Pavlov's work sufficiently into account and reject the conclusion that the nervous system organizes the pathological process. After all that had happened before, this is equivalent to his rehabilitation in Soviet science.

But even if the theories of Ricker and Speransky, which are based on scientific and experimental evidence, and if every hypothesis on which we rely are all denied, there is one glaring fact that cannot be contested: millions of cures that can no longer be denied and that are all the reason that neural therapy needs to justify its existence, for with Nietzsche we can say that "facts are also a form of interpretation!"

Incidentally, Speransky also knew of the work done by Spiess, although this was quickly forgotten again in Germany. From him he also adopted Novocaine as the product for use in his "therapeutic anesthesia." In this, the therapeutic result was, in his eyes, not merely the effect of the elimination of pain. He regarded anesthesia as only one of many neural stimuli capable of facilitating the reharmonization of intraneural relationships. He also discovered that the effect of this stimulus was greater, the weaker the dose.

In his investigations on the importance of neural receptivity in pathology, Speransky proved that the site of administering the tetanus toxin plays an important part in the course that tetanus will take. Its effects are at their most toxic when it acts directly on the receptor organs. Also of interest to us is his statement that tetanus does not occur if the toxin is injected together with Novocaine. He concluded from this that Novocaine (procaine) is able to reduce the sensitivity of the receptors. I am more inclined to the view that the toxin creates a massive interference field by its strong local effect, in allowing the tissue potential to collapse unphysiologically, severely, and for a prolonged period. With the changes that occur in the membrane potential of the nerve fibers, rhythmic discharges of current take place and strong neural disturbance impulses are thus emitted with a destructive alarm-code message. What creates the dangerous reaction is simply the response to this strong neural stimulus and the faulty information it carries. If procaine is injected at the same time, the normal potential is maintained or immediately re-established if any depolarization has occurred. Thus, no interference transmitter for false stimulus messages can be formed and the tetanus cannot manifest itself. At the end of his book, Speransky writes: "In conclusion, I consider it mandatory for the medical profession to adjust the common attitude toward the method of Novocaine block." This statement holds true to this day.

c) A. W. Vishnevski

Vishnevski, in his animal experiments, severed the sciatic nerve and infected its proximal end with pus or produced some other irritative stimulus on the nerve. Here again, surprisingly, the weakest stimuli proved to be the most effective! About 2 months later, independently of the surgical lesion, ulceration appeared on the same leg, and subsequently also on the other. Here, too, removal of the primarily irritated nerve ending was able to stop the process only at the initial stage. Once the process had become autonomous, it proved no longer possible to influence it from there. Even if one ought not to generalize unselectively from separate observations, there are nevertheless some striking parallels here with the appearance of eczema, furunculosis, psoriasis, and a number of other skin diseases. We are indebted to Vishnevski for the technique published in 1948 for the injection to the → (T) sympathetic chain at the level of the upper kidney poles. He proved the regulating influence of this anesthetic technique on tissue trophism, since he was able to use it to cure a large number of different pathological conditions, from otitis media to gangrene of the lung.

d) K. M. Bykow

Bykow set himself the task of investigating "higher cerebral functions" in the human being. For this he began from Pavlov's teachings on conditioned reflexes, but he included in his neuropathological observations all autonomic and organic changes that can be produced by the psyche via the emotions. Thus, he went a step further than Ricker and Speransky and entered the field that we define by the collective term of "psychosomatic" (soul and body) problems.

Bykow was able to show that it is not possible to distinguish between neurotrophic impulses and other regulating and driving impulses. In his view the decisive neurotrophic impulses originate in the cerebral cortex, whilst the diencephalon is only of subordinate importance. This is to say that the cerebral cortex processes all the impulses coming from within and from without the organism and then switches the individual organs and organ systems on and off as required, and coordinates their activities in a balanced fashion. According to Bykow, the reflexes emanating from the diencephalon to regulate these processes are also subject to cortical control.

The Russian school found independently that Novocaine (procaine) has a favorable effect on the relations

between the cortex and the sub-cortex and that it is able to promote the re-establishment of the disturbed corticovisceral dynamics. According to the view of these Russian researchers, the nature of the procaine effect is connected with two physiological moments, "namely with the inactivation of the nerves and with the stimulus. The first moment is effected by interrupting the impulses during anesthesia, the second by the effect on the general trophic regulatory activity of the nervous system, which reacts to the Novocaine treatment of the nerve as to an active process, i.e., as 'irritative stimulus'" (Wedenski). Thus, these Russian researchers fully confirmed the observations by the Huneke brothers that a correctly sited anesthetic is able to guide pathological reflexes and hence pathogenic disturbances in the neurovegetative system into desirable channels.

Soviet medicine has made practical use of these theoretical discoveries by its scientists. With their local procaine injections and with their injections to the sympathetic chain they are practicing neural therapy in our sense of the term. Thus, amongst other things, they draw attention to their clear achievements in the prophylaxis and treatment of → shock during World War II. For the forces that become effective in shock they assume a complicated neurodystrophic complex, which it would be difficult to explain fully. But this has not prevented them from treating shock successfully with procaine. They believe that they can prove by impressive statistics that compulsory procaine shock prophylaxis prescribed in the Red Army has alone been responsible for saving the lives of very large numbers of soldiers.

Further, the work of the Romanian school around Professor Aslan, who is known to use procaine successfully in geriatrics, is based largely on the work of Pavlov's pupils. They are a valuable extension of the basic research on the subject. However, we cannot always accept Professor Aslan's conclusions. We shall deal with this subject more fully in the chapter on "Rejuvenation through Procaine?"

6 Of Pain, Inflammation, and the Axon Reflex

The pains it is I call to aid. For they are friends, sound their advice.
Goethe (*Iphigenia*)

Pain is in many cases a friend and a warning that points out dysfunctions to us. But, in addition it can also further the pathological processes or even become an illness in itself. In such a case its elimination acquires etiological importance. Leriche even described pain as a "superfluous plague of mankind." Considered from a cybernetic standpoint, pain points to a functional impairment or a threatening functional disturbance, where a discrepancy has appeared between effective and required values, which then acts as a disturbance to orderly vital processes. The pain process is a chain of physiological reactions. Pain is produced when specialized receptors, so-called nociceptors or their afferent fibers are excited by specific stimuli or by the summation of unspecific stimuli. At the periphery, pain produces vascular and tissue reactions, which may progress to inflammation. The irritation is relayed by the A-delta and C fibers via the synapsis to the posterior-horn neurones of the spinal cord. This has spinobulbar relay centers for protective and defensive reflexes ("fight or flight" reactions), such as defensive movements or the corneal reflex. The pain stimuli transmit this information further to the midbrain. In the thalamus all reflexes of the neurovegetative internal system and of the peripheral sensory animal environmental system are collected and modified individually.

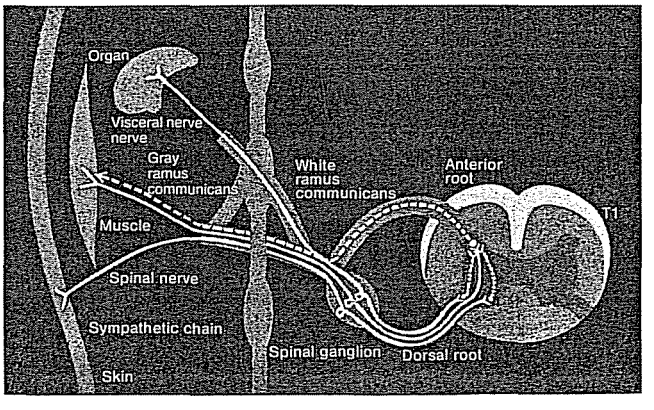


Fig. 1.2 The pain pathways in the skin, the deeper layers and the viscera (according to Hansen and von Staa).

The reticular formation is a relay center that coordinates the afferent stimuli to purposive efferent motor and autonomic action and adapts them to extra-reticular processes. In the hypothalamus there are autonomic control centers that also regulate hormone production (e. g., ACTH and endorphines). The information is ultimately transmitted to the cerebral cortex, where the pain becomes a conscious, affective experience. The pain tolerance may be lowered by fear, depression, grief, loneliness, and sleep deprivation. Where as autosuggestion, affection, hope, and sleep may increase it. Depending on the anatomical circumstances, there are two genetically different types of pain origin:

a. Pain due to outside factors, produced when the receptors available (as in the case of wounds, heat, cold, chemical irritants etc.) are directly stimulated. It generally manifests itself as a continuous pain.
b. Pain due to internal causes tends to have a more variable character and to come in surges. The stimulus travels from its point of origin in the internal organ to its respective paravertebral ganglion of the sympathetic chain and then via the rami communicantes together with the segmental nerve to the posterior horn of the spinal cord. Now the transmission to the thalamus, as described above, takes place. It is accompanied by information from skin and muscle areas that are supplied by the same spinal cord segment, which allows for the projection of internal organ pain onto these skin and muscle areas (see Fig. 1.**2**). In addition, a transmission to the intermediate zone of the spinal cord takes place. From there, efferent fibers travel via the rami communicantes to the ganglion of the sympathetic chain. After being relayed, the fibers end in these skin and muscle areas and initiate reflex responses in the relevant vessels (see Fig. 1.**12**, p. 64). If a sensory autonomic nerve fiber is irritated, a reflex is set off that modifies the blood supply. With moderate stimuli, there is a vascular spasm (as in ischemic muscular pains), whilst stronger stimuli cause dilatation (inflammation). When the tolerance threshold of the circulatory-sympathetic system is exceeded, pain is produced. Kulenkampff stated that "there is only one system that can be regarded as the carrier of what we call pain: the sympathetic system."

Pain can excite the motor and autonomic nerve fibers to such an extent that they respond with the contraction of the adjacent musculature and with vascular spasm. The reduction in the blood supply then continues to lower the irritation threshold of the sensitized nerves and receptors even further until pain, muscle contractions, inadequate blood supply and hence metabolic disturbances in the tissues, and increased pain, combined with reduced defensive capability interact in a vicious circle, which prevents or at least delays the autogenous healing process.

As long ago as 1906, Spiess drew attention to the fact that inflammation of all kinds can be arrested and healing accelerated by local anesthesia. Bruce proved that the inflammatory reflex set off after excitation of the sensitized nerve endings is not dependent either on the central or the spinal channels but that it must originate in the peripheral nerve itself. He concluded that the sensitized nerve fiber divides distally from the ganglion and that one branch then leads to the skin, the other to the blood vessels. In an inflammatory reaction, the pain stimulus thus directly sets off vascular dilatation, permeability of the capillary walls, and all the other processes that then produce the classic signs of inflammation. Since the inflammation in its turn brings with it additional pain, the process escalates continually. This reflex, which leads to the vicious circle already referred to, is known as the short-circuit or axon reflex.

It is now generally assumed that the sympathetic system plays a leading part in the origin and conduction of pain, and in its elimination as an experienced phenomenon. According to Pischinger, there is a direct synaptic link only in the case of the muscle cell. Elsewhere, the stimulus is transferred from the physical to the chemical medium and can pass into the basic autonomic system only by this means. In doing so it can be modified. Thus, the cell is not an isolated, independent structure, as Virchow regarded it, it is non-autonomous and is viable only in conjunction with other cells. Since every part of our organism is inseparably connected with every other and is dependent on all the others, any disturbance in one part of it inevitably produces disturbances also in the whole autonomic structure. The unimaginably complex unifying and guiding principle that connects all the cells in the human body and that comprises body and psyche uses the neurovegetative (including the basic autonomic) system as the instrument by which alone the miracle of life is made possible. But the living organism is subject to laws that can never be fully comprehended and measured by science. Pain and illness are modifications of this living organism.

If, by involvement of the psyche, pain is then moved unconsciously and unintentionally into the center of the stage, it can only be augmented and fixed in the psychic component. Finally, the fear of pain can no longer be separated from the pain itself. Pain is always something very relative. I once told a woman patient under hypnosis that she no longer had any feeling in her body. She believed this and the surgeon was able, without any additional anesthetic, to remove her appendix painlessly. A toothache at night can drive us insane. In the dentist's waiting room early next morning it diminishes to the point where we are almost ashamed to have made such a fuss. During the night, the pain held the center of the stage and this enabled it to assume gigantic proportions. Distraction and the prospect of early relief reduce it to its proper, bearable magnitude.

One of the physician's finest and noblest tasks is to relieve and eliminate pain. Someone who can do this well is a good doctor! For the neural therapist it is not too difficult to break the pathogenic chain attached to pain and thus to induce the healing process. This is also true of the numerous cases where pain sets off reactions that go beyond its function as warning signal, as, for example, in trigeminal neuralgia or in the painful immobilization of extremities after injury beyond the necessary healing period. In all these cases an accurately placed anesthetic at the point where there is a loss of function is an important component of this therapy and, with regard to psychological processes, it is also psychoprophylaxis and psychotherapy, without the need to resort to the term "suggestion" for this. It is a fact that the neural-therapeutic effect is one of normalization that re-establishes the autonomic equilibrium, that this effect lasts considerably longer than the temporary numbness caused by the local anesthetic, and that it manifests a curative action that cannot be explained from a purely pharmacological standpoint alone.

The relief of pain is often in the forefront of our efforts, but it is by no means the main purpose of neural therapy. It would be to underestimate its importance if one were to assume that our therapeutic scope is exhausted merely in relieving pain. Pain is only one of a number of means whereby a disturbed bodily function can express itself, even if it is a frequent and an impressive one. To us, pain is a good indicator, for it proves to us by its disappearance that our efforts have been correctly applied and provides us with the opportunity to intervene in a truly regulatory manner in the disturbed neurovegetative system.

7 Theories on Pain and the Effects of Anesthesia

The vital processes undoubtedly run their course according to certain laws, but the means available to us are incapable of recognizing these laws.
Much

The nerve cell consists essentially of a cytosome with its nucleus and of fibrous processes (one axon and several dendrites). In the past it was assumed that the cell was supplied only from without and that the nerve fibers merely had the function of electrical leads. Modern neurobiology has revised this picture. We now know that the nerve cell is a minute but very powerful computer, which not only transmits information but also coordinates all bodily functions. In doing so, it gathers intelligence in the form of experiences, which is then stored in its stimulus memory. The nerve cell is an active building block that can produce and transport materials and that, in an emergency, can even repair itself. From all the materials available it carefully selects only those that it needs for its own requirements. From these it continually produces in the body of the cell the material it needs for its own maintenance and function. This material has about three to four times the volume of the cell itself. From this it is possible to conclude that the process of excitation uses energy and is subjected to attrition losses that must be constantly replaced. A continuous stream of neural material moves the nerve-fiber membrane and the whole of the neuroplasma column with all the organelles it contains (mitochondriae, tubuli, filaments) at a speed of 1–3 mm per day from the cell itself out to the fiber-end zones. But apart from this there is also a much faster supply stream for particle-specific neuroplasma components, which moves at 40–70 mm per day, including transmitter substances and phospholipids.

These two supply systems moving at different speeds ensure that all the chemical building blocks arrive at their destinations at the right time. The same also applies to the transmitter substances (e. g., noradrenalin) that are given off during the excitation process into the cell's environmental system or into the synaptic gap. The electrical excitation can be transmitted by one cell to another only by means of chemical processes. Thus, the nerve cell is not a stable structure, but rather subjected to constant change. Its metabolism can also be influenced from without. We know that the antibiotic Actidion can cause the slower of the two supply systems to stop, whilst the alkaloid colchicine halts the faster of the two. Amongst local anesthetics, procaine does not interfere with this important transport of building blocks in the axons, whilst lidocaine (Xylocaine, Xyloneural), like the hallucinogenic drug mescaline, acts as inhibitor to these supplies. This doubtless also has a negative effect on the functional activity at the synapses (G. W. Kreutzberg).

M. Zimmermann states that long-term disturbances of the neural and humoral regulation will also cause disturbances of the axoplasmatic transport. This will lead to relay changes in the synapses of the posterior horn and can become the origin of faulty motor and synaptic reflexes. Vasoactive substances, for example the polypeptide Substance P, are released from sensory nerve endings in the skin, internal organs, and the teeth. Some of the sensory nerve fibers transport the substance from the spinal ganglion to the periphery where it is secreted. At this point, it presumably regulates the microcirculation and the vasopermeability. An adaptive regulation through Substance P has to occur if a nerve lesion interrupts the substance transport. The axoplasmatic transport includes substances that the nerve fibers absorb from the outside, including toxins (tetanus), viruses (herpes), as well as medication.

The peripheral autonomic fibrils in the human organism are unimaginably fine, having a thickness of only 0.002–0.01 mm. What happens in these extremely fine conductors is still only vaguely known, but we do know that within they have a negative electrical charge and outside they are positively charged. In between lies a surface membrane that normally provides perfect insulation. It is thought probable that the limiting surfaces of the nerve fibers at rest are impermeable and that the sodium, potassium, and hydrogen ions are in equilibrium. When this is the case, the electrical potential of the cell membrane is very high. The concentration of potassium ions within the cell is about 20 to 40 times greater than in the extracellular space. This concentration differential is the reason for the high electrical potential of the membrane, amounting to about –40mV to –90mV in the case of nerve and muscle fibers.

Seen in this light, the cell is a kind of potassium battery, which can function only if it is continually able to take up potassium ions. Oxygen metabolism, glycolysis

and the conversion of energy-laden phosphate are also tied to the exchange of electrical charges by ions and colloids, and mainly serve for the intake of potassium for maintaining the potassium concentration within the cell at the requisite high level. At rest, potassium output and resorption are in equilibrium.

The active cell membrane is like a sieve, the gauge of whose mesh is cybernetically adjustable. In other words, its permeability to ions of different sizes can be altered electrically. If the nerve receives a physiological or even a noxious unphysiological (chemical, mechanical, thermal, or electrical) stimulus, the surface membrane relaxes and becomes more permeable. As a result, potassium ions escape from the cell and sodium ions enter. But since the nerve cell is kept in its electrically charged state by virtue of the differential concentration of ions within and outside it, the loss of potassium allows this ion concentration to become equalized. Thus, the electrical potential of the surface membrane collapses and the nerve loses its electrical charge. This results in depolarization, producing impulses in the nerve, which are transmitted to the spinal cord, the brain stem, and the cerebrum. The sensation of pain thus also registers and controls electrical impulse patterns (depolarization) and signals any unphysiological or noxious stimuli. The higher the initial potential of the nerve cell (membrane resting potential, MRP), the greater must be the stimulus needed to produce depolarization. Disturbances in the oxydizing cell metabolism influence the MRP and thus indirectly affect the depolarization rate and the perception of pain. (See Fig. 1.**3**.)

F. Eicholtz explained that "pathology needs to acquaint itself with the idea that changes in electric potential, not only of nerve but all cells, or synonymously, changes in the number of sodium, potassium, and hydrogen ions at the limiting membrane of the cell are some of the main sources of inflammation and other pathological changes."

Every injury (including our pinprick) stimulates nerve endings. This releases substances, for example, bradykinin, serotonin, and prostaglandin E that are common in inflammations. They are neuroactive, i.e., sensitizing or stimulating, in regard to nociceptors. Due to the fact that they are also vasoactive, they affect the microcirculation either through abnormal vasoconstriction accompanied by hypoxemia of the tissue or

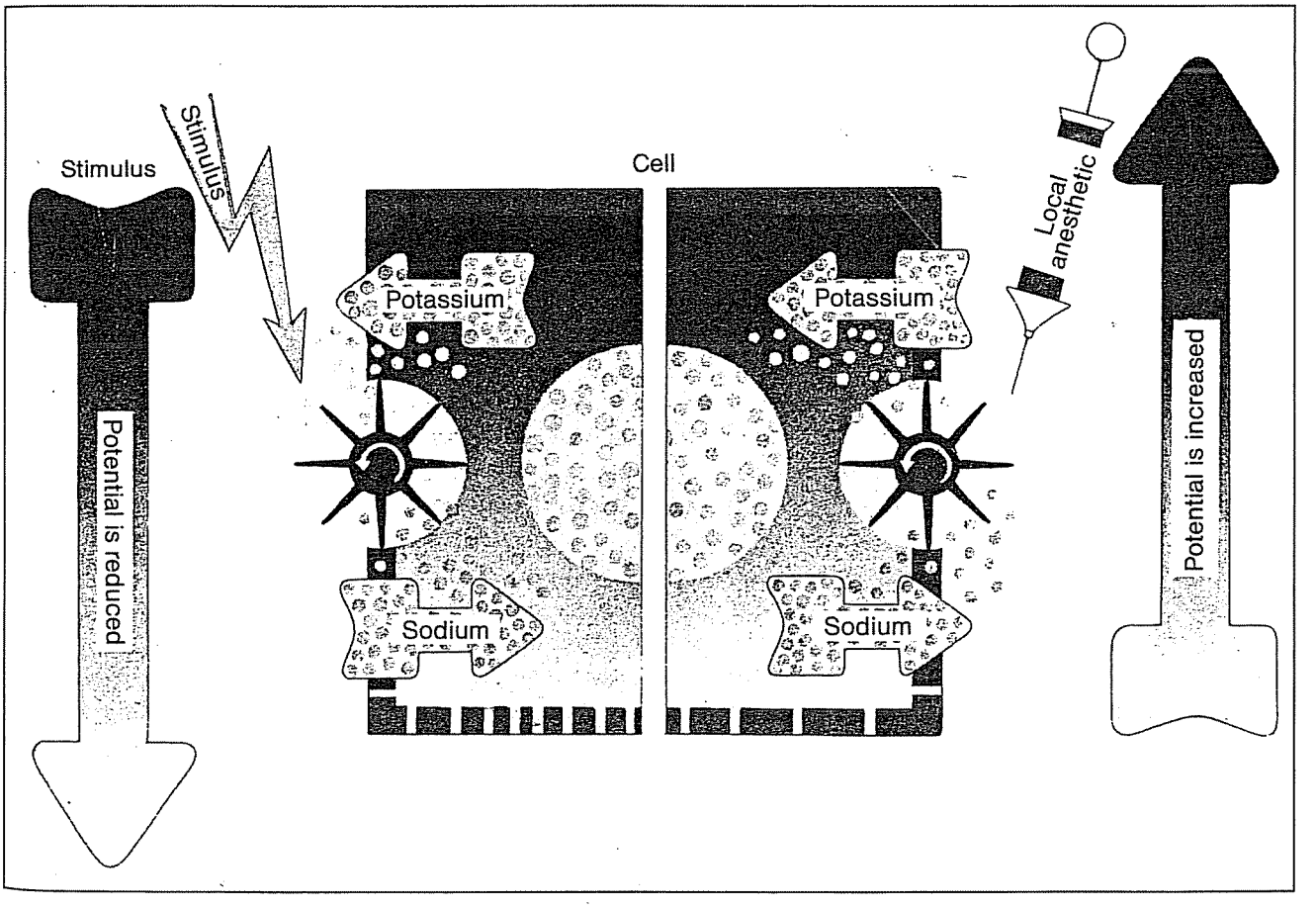


Fig. 1.3 **The potassium–sodium pump.** Every stimulus depolarizes the cell and produces stimulus patterns. The membrane resting potential (MRP) is lowered by permanent irritation and oxygen metabolism is disturbed. Local anesthesia seals the cell membrane. The MRP is increased and this leads to more intensive metabolism. Potassium ions re-enter and sodium ions leave. Toxins and metabolic waste are carried off to the cell environment. The cell is stabilized and its function again becomes normal.

vasodilation with increased capillary permeability. The cell environment is changed, which may stimulate additional chemoreceptors. In this process, these changes can have an exponential effect on each other, which may lead to an increase in pain or other noxious stimuli. In the central nervous system, information about pain from the periphery initiates stimulating as well as inhibiting reflexes, including endogen and endocrine analgesic substances like endorphins or encephalin. This way the beta-endorphin, secreted by the pituitary gland and the brain, is able to block pain information.

Every tissue damage causes a change in the number of H^+ ions when potassium leaves the cell. Potassium and acids formed in the tissue produce pain. A pH of 7.2 is tissue isotonic. Alkaloid solutions with a pH of 8.0 and above are pain-free. The more acidic the solution the greater the pain. Segmentan is a 1.29% sodium bicarbonate solution that is free of local anesthetics. It has an analgesic effect because it shifts the tissue pH toward the alkaloid area. The pH of painful inflammations is 5.9. Pus that stems from pain-free cold hypostatic abscesses shows a neutral reaction. The patient will experience pain, just like in an acute inflammation, if the pH value shifts following the injection of an acidic phosphate solution.

According to Fleckenstein and Hardt, procaine (Novocaine) acts as a true antagonist in these electrophysiological and biochemical processes in the local occurrence of pain in both tissues and sensory nerves. Local anesthetics consist of a water soluble (hydrophilic) amino group, an intermediate chain, and a fat soluble (lipophilic) aromatic rest. The hydrophilic part allows the local anesthetics to reach the nerve via tissue fluids. The lipophilic part enables it to penetrate the nerve. Due to this structure it is membrane-active. It can block the sodium channels by docking on the external side of the cell membrane. All persistent pain stimuli increase the permeability of the membranes and lead to a potassium loss in the cells and hence to depolarization. L. Eppinger states that, "the more we look into problems with permeability the more we get the confirmation that at the beginning of nearly every disease process we discover membrane damage or change in membrane permeability."

Local anesthetics act precisely in the opposite sense, and do so in lower concentrations than those needed for local anesthesia, by protecting the surface membranes against long-term excitation patterns, since they seal the membrane and prevent depolarization of the nerve cell by low-power stimuli. Thus, they stabilize the membrane potential and protect it against any depolarizing noxious influences. Equally important is the fact that by the "nerve block" produced by the procaine, which acts like a chemical means of setting the cell in a state of rest, the cell is made capable of recharging itself under its own power with the electrical potential lost as a result of the pathological stimulus. With the disappearance of pain the reactive inflammation also disappears. In procaine's ability to permit this repolarization by increasing the membrane resting potential and to protect the nerve cell against depolarization by low-power stimuli, together with the temporary transmission break, which it produces along the pain pathways, we obtain an intelligible and adequate explanation for the undeniable and wide-ranging therapeutic capabilities of local anesthetics.

Fleckenstein and Hardt reached the conclusion that pain-producing substances can also produce interruptions in the nerve circuits and that procaine is able to repair these interruptions. Fleckenstein concluded from these apparently contradictory results that procaine can act in either (or both) senses, depending on the initial autonomic state, and that it can thus compensate for any deficient performance:

> Whilst normally modulating excitatory waves which mutually complement one another to a harmonious overall picture in accord with the outside world are transmitted to the central nervous system by the concerted action of all the peripheral receptors, we must assume that depolarization due to painful stimuli leads to unmodulated excitation streams that deviate from the normal type and form a discord in this harmony.

This is how Fleckenstein formulated what we, as neural therapists, know as the interference-field effect. He studied only the processes that occur in the causation and transmission of pain, but we believe that his conclusions can be extended to all "noxious stimuli" that run their course in the so-called nociceptive system. It is today assumed that these noxious stimuli are conducted primarily by the C fibers, but that the A-delta fibers also play their part.

Procaine first of all blocks the finest fibers. It acts on and progressively eliminates the dull pain, then the sharp pain and finally the sensitivity to pressure. Since the conduction velocity of the A-delta fibers is substantially greater than that of the C fibers, it is thought that the sharp superficial pain is transmitted by the A-delta fibers, and the deep, dull secondary pain by the C fibers. Local anesthetics are not narcotics, since brain function and pain perception remain fully intact. Local anesthetics prevent not only the pain from being generated but also the nervous impulse from being transmitted further, by inhibiting the fundamental process required to generate the nerve potential, namely the substantial temporary increase of membrane permeability to sodium ions. The threshold of electrical excitability is continually raised as the anesthetic effect in the nerve increases until its onward transmission is ultimately blocked completely. The precise mechanism by which the membrane is influenced by local anesthetics is still unknown.

The neurophysiologist, Lullis, made an interesting observation in this context. Stimuli that travel through the peripheral nerves not only can be diminished but also amplified. Information reaching the periphery and the center may have increased compared with the strength of the initial stimulus:

> Mechanical or chemical processes in the nerve or its surroundings, such as pressure, scars, inflammation, edema, or agents that are artificially introduced to the nerve are generally able to decrease and increase the passing nerve stimuli. We believe that some hyperesthesias, hyper-reflexias, and contractions originate this way. The analysis of such disease pictures has to be difficult if it is assumed that their origins lie in the center alone and the nerve is merely the "wick" that transports "all or nothing."

The term "procaine block" has become so well established in medicine that we need to spend a moment in discussing it. It tends to suggest that the procaine injection sets up something like a barrier between synapse and terminal neuroreticulum, and that this barrier interrupts the neural reaction mechanism. By this means the centrally controlled stimuli from outside the organ that precede and sustain the pathological processes are switched off. The segment would thus be neurally isolated from the relay station and left subject only to its autonomous peripheral control. The reflex processes that no longer obey the normal rules and that secondarily govern local events are thereby guided back to normality and thus produce a new initial position.

Against this it may be possible to object that in such a case, once the local anesthetic has ceased to act, the defective overriding control from the center will again allow the peripheral events that depend on it to continue from the point at which they left off. In that case, everything would again return to the earlier state. But this is not so, for the therapeutic effect may persist for days, weeks and sometimes as a complete cure for a lifetime, provided always that the injection is given at the correct site, and regardless of the fact that this site is by no means limited to predetermined nerve pathways.

As we have seen, the regulation-therapeutic stimulus is produced by quantities well below those needed for local anesthesia. Nor is it limited to the use of an anesthetic. As we know, it can be produced by the use of bicarbonate of soda, formic acid, planosol, air, or simply by inserting a needle in the right place, although these alternatives produce stimuli of another order of quality. In our view, the neural-therapeutic effect is a non-specific irritation therapy in which, after unblocking the nerve circuits by means of autogenous healing powers that have again been set free, the stimulus threshold is raised in such a way that the stimuli that were earlier able to induce morbidity now remain below this threshold.

F. Huneke also fought against the idea that procaine merely produces a nerve block, since the healing effects of his therapy cannot be explained by this. Neural therapy in its wider sense includes acupuncture, selective massage, spinal manipulation, and other cognate forms of treatment, and he argued that these were all capable of producing healing phenomena similar to those of neural therapy with correctly sited procaine injections. He could not therefore believe that all such cures could be produced as a result of some temporary interruption of the nervous system, but was convinced that they could be nothing other than healing stimuli that unblocked and reactivated nerve function.

In his view, whenever the needle used for an injection or in acupuncture penetrates the skin, it passes through thousands of electrically charged autonomic fibrils and hence also through their protective covering. This produces short circuits in the electrical structure of the neurovegetative system. The injection of procaine intensifies this short circuit, because it is also capable of putting the insulating nerve covering temporarily out of action. Electrostatic energy can thus flow into the surrounding tissue and pathogenic differences in electrical potential are again brought into balance. The nerve is therefore temporarily without current and is thus biologically dead. This short circuit acts as if it were a stimulating force to the entire neurovegetative system, to which the system then responds as a whole. If this occurs at a point where the building blocks have been displaced and whose displacement has, as it were, caused the whole building to lean, then these displaced building blocks can be put back where they belong, and this at lightning speed. According to him, the correctly sited procaine injection blocks nothing; it influences the functional unity of the neurovegetative system in the sense of a functional correction far beyond the injection site. He therefore felt unable to accept the misleading term "nerve block." In addition, the complicated methods used in the studies that led to the use of this term contained so many possible sources of error that any conclusion based on them could not be justified. Even if all the measurements obtained by research on dead building blocks could be assumed to be correct, they did not suffice for explaining and understanding the holistic healing processes that, in his view, occurred within the non-rational area of life. This neovitalist attitude shown by F. Huneke is one of the reasons that he encountered disapproval and rejection from the medical establishment with its materialistic outlook. However, one need not share Huneke's philosophy in order to make successful use of his teachings.

Thus, as already stated, Fleckenstein, Hardt, and also Eichholtz regarded the anesthetic effect as the impermeabilization of the cell membranes and as an increase in their electrical potential. Huneke, on the other hand, is at the opposite end, in seeing an increase in the permeability of the membranes and a collapse of electrical

potential. In 1965, I received a letter from Professor Vishnevski in Moscow on this subject, in which he wrote:

> Based on the latest neurophysiological research, the fact has now been established that a barrier is created in the nerve fibers at the site of a Novocaine injection, which blocks the passage of neural stimuli. The electrical potential of the nerve-fiber membrane is not in any way reduced by this but, on the contrary, it is increased. The studies at our institute, made for this specific purpose on isolated nerve fibers, have shown that Novocaine reduces the ion permeability of the membranes, i.e., that it has a stabilizing and not a relaxing effect on these fibers. Perforation of the nerve fibers by the needle produces purely local depolarization of the membranes in the immediate neighborhood of the puncture, but not more than 2 mm away from this point the electrical potential of the nerve-fiber membrane remained unchanged.

To this one may add that a short circuit within a radius of 2 mm from a 1 mm diameter needle will in fact involve many thousands of nerve fibers on each occasion, when we bear in mind that a fibril has a diameter of only 0.002–0.01 mm, and that Huneke's assumptions about the injection site would therefore seem to have been confirmed.

Despite these important partial results we are still not in a position at the time of writing to state exactly all that does in fact happen in the non-isolated nerve with its normal, numerous interlaced connections in every direction, when first the needle (on being inserted) and then the procaine act upon it. We still know too little and must have the requisite humility to admit our ignorance.

But in any event one thing seems clear enough: the term "Novocaine block" is a bad choice. For ultimately the neural-therapeutic effect is obtained not solely by any temporary interruption of the nerve pathways that the procaine may produce, but in my view only by the rehabilitation of the nerve fiber that has previously been damaged by stimuli. By restoring the electrical potential of about –40mV to –90mV, the regulatory disturbances in those parts of the neurovegetative system are eliminated where we, as neural therapists, see the "block." Once order has been restored at every level of the neurovegetative system, all vasal, humoral, hormonal, and even psychological and other forms of secondary disturbances are restored to normality, i.e., health. The normalizing stimulus produced at disturbed and disturbing points is what really matters. Only the extent of this stimulus will vary, according to whether it is produced by acupuncture, selective massage, Kneipp's hydrotherapy or other forms of skin stimulation, by irradiation, or by procaine. However, the healing stimulus produced by procaine has a dominant, outstanding place in this scheme of things, on account of its safety in use, and the speed and extent of its effect.

Melzack and Wall produced their gate-control system theory (1965) (see Fig. 1.**4**), in which they stated that, following all noxious stimuli, neural impulses are transmitted to the gelatinous substance in the posterior horn of the spinal cord, the posterior gray columns (which lead to the cerebrum), and the first central T (transmission) cells in the posterior horn. According to the gate-control system theory, there is a mechanism in the gelatinous substance that acts as a gate in controlling the transmission of neural impulses from the peripheral fibers to the central nervous system, i.e., which amplifies or inhibits their transmission, before they can influence the T cells, which are linked to the action system. The afferent impulses also produce some central control that activates certain mechanisms in the brain that, in turn, again influence the control characteristics of the gate-control system. These efferent central effects make this gate wider (as is also the case of the small fibers) or narrower (as with the large fibers). If the total number of message impulses passing through the gate exceeds a certain limit in the exit for the T cells, pain signals are produced in the areas responsible for pain perception and reaction. By way of

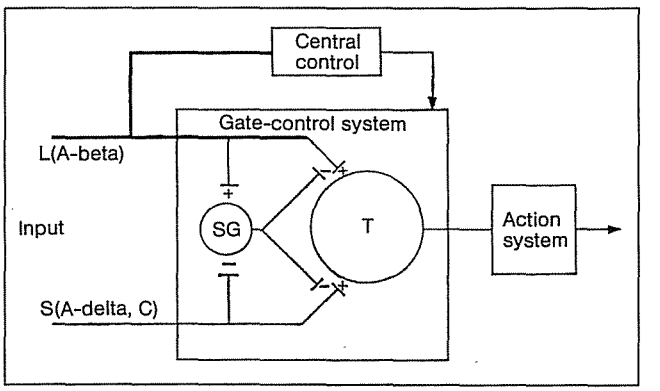


Fig. 1.4 **Diagram of the gate-control system theory of pain perception according to Melzack and Wall.** The fibers lead to the gelatinous substance and to the first T (transmitter) cells of the posterior horn. The inhibitory effect produced by the gelatinous substance on the afferent fiber ends is sustained by activity in the large fibers and the gate is thus closed. Activity in the small fibers attenuates the inhibitory action and the gate opens. The central feedback control mechanism, which receives its information from the posterior and lateral columns, is shown by a line from the large-fiber afferences to the central control system and thence back again to the gate-control system. The T cells are linked to the entrances to the action system.
L (A-beta): Large A-beta fibers
S (A-delta, C): Small A-delta and C fibers
SG: Subtantia gelatinosa
T: Transmitter cells
+ Excitation
– Inhibition
(*Source:* R. Melzack. The puzzle of pain. Harmondsworth: Penguin Books; 1973.)

reflex response, counter-regulating reactions can be triggered by these central feedback mechanisms (negative feedback) to reduce or eliminate the stimulus (defensive movements, corneal reflex, increased blood supply etc.).

But the central nervous system can also constantly stimulate the nociceptors by positive feedback and thus produce chronic pain, for example when there is a change in the afferent flow or if the stimulus continues for lengthy periods (qualitative fiber changes, inflammation etc.). Various activating effects on the sympathetic system and increased reflex tonus in the skeletal musculature (→ muscle spasm) lead to increased stimulation of the nociceptors, which are located mainly in the muscles, ligaments, and ligamentous attachments. After passing via the spinal cord, this stimulation increases muscle tonus. Positive feedback thus results in a vicious circle that can progressively aggravate the constant pain and extend the disorder. The development of a positive feedback mechanism does not depend on a segmental or any other correlation and may develop anywhere. This is what F. Huneke discovered and taught about interference fields.

As possible causes of positive feedback by efferent action of the sympathetic system, other mechanisms are also under discussion:

a. By reflex vasoconstriction, positive feedback may reduce the blood supply. In the affected area, this may progress to the point of ischemia, which can then activate the pain receptors to a greater extent.
b. One theory holds that there may be a direct transfer of the sympathetic system's efferent activity to closely adjacent nociceptive afferent fibers, e. g., in the case of neuromas.
c. Wall assumes that neurotransmitters belonging to the sympathetic system, particularly noradrenalin, may intensify the nociceptive afferent stimuli and so produce positive feedback.

Therapeutic measures can interrupt the stimulation circuit. Local anesthetics can interrupt the vicious circle in the segment at nociceptors, pain-conducting nerves, and at the sympathetic chain. In the case of interference fields, it can be interrupted at its origin. Natural regulation (negative feedback) can be restored.

Transcutaneous electrical nerve stimulation (TENS) interrupts the stimulation circuit in a different way. Two electrodes are placed on the skin above a nerve or its surroundings. From there, the nerve is stimulated through the skin. This is done using a low electrical stimulus of 40 to 100 Hertz, which equals 40 to 100 stimuli per second. The intensity of the stimulus remains considerably below the pain threshold. The patient perceives it as a vibrating or prickling sensation. The muscles respond with mild tonic contractions. The paresthetic stimulations superimpose and suppress the pain because they only stimulate the bigger nerve fibers that conduct sensitivity to touch (not the pain!), which results in a narrowing of the gate (according to the gate-control system theory). The analgesic effect exceeds the application time by 30 minutes up to several hours. TENS can be used with patients who are taking anti-coagulants, not with patients who are using a pacemaker or other metallic implants, in the case of thalamus pain or areas with sensitivity disorders.

My personal working hypothesis

> Hypotheses are actually essential for the progress of science. Their revision requires the development of new technology and the use of new skills. It is ultimately of no importance whether the hypothesis was right or wrong. Its purpose is to initiate progress (A Carrel).

The current idea of how the procaine "block" acts is approximately as follows: while the neural pathways are temporarily interrupted, all pathological reflexes that are normally transmitted along them are also stopped. By eliminating the sensory part of the nerve I can block pain, paresthesia, itching, and other sensory phenomena and so prevent abnormal reflex mechanisms from being produced secondarily via the efferent branch. If I interrupt the somatic motor nerve, I can relieve spasm in the skeletal musculature. If I interrupt autonomic channels, especially the sympathetic system, I eliminate a pathological autonomic activity, which can originate either from a pathological state within the segment or from a focus.

But in my view this does not adequately explain the effect of procaine in neural therapy. With the brief, reversible procaine block we do in fact interrupt the cycle of stimuli at the nociceptors, in the nerves and sympathetic chain, whose positive feedback has caused the vicious circle. Thus we also temporarily restore the natural regulating system with its negative feedback to effectiveness. But once the anesthetic effect has worn off, then all these pathological reflexes would have to become active again in the same way and as strongly as before. However, when the procaine has been carefully pinpointed to act on pathological, previously damaged segmental tissue or on an interference field, the therapeutic effect always goes far beyond the short-term anesthetic effect. The therapeutic effect is increased through repetition until the condition is healed, as far as that is structurally still possible. From this one may conclude that during anesthesia (hyperpolarization phase), when cell function is at rest, energy-producing mechanisms may recover to the point that they can rebalance the decreased membrane resting potential, which allows the cell to function properly. This induces a lasting change of nerve function toward normality. Thus, there must be a fundamental difference between

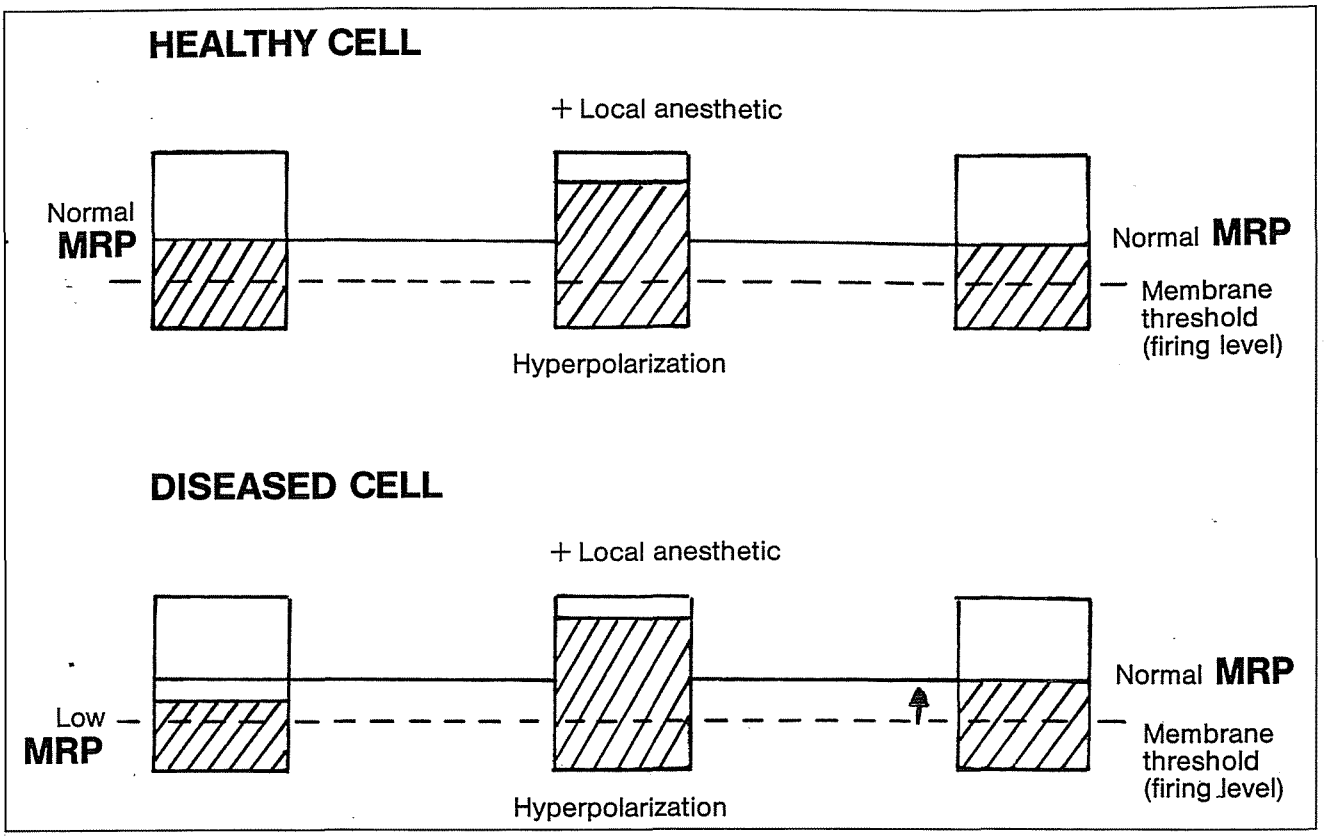


Fig. 1.5 **The difference in the effects of anesthesia and of neural therapy using local anesthetics.** The healthy nerve and muscle cell requires a stimulus to reach a certain level before it begins to become depolarized from the membrane resting potential (MRP) and emits excitation patterns. Following the administration of a local anesthetic the cell becomes hyperpolarized and is desensitized. When the anesthetic effect has worn off, the cell recovers its original MRP. Everything is as before. The diseased nerve and muscle cell has a lower initial MRP. A weaker stimulus will suffice to depolarize such cells. This cell will tend to a much greater degree to produce long-term excitation patterns. When the anesthetic is administered, hyperpolarization is produced, which again desensitizes the cell. But something substantially new happens as a result: in this phase, cell metabolism is intensified to such an extent that the cell attempts to dispose of all metabolic waste products and toxins into the adjacent environment. If it succeeds in this, the MRP no longer reverts to its low initial value; instead, the cell becomes stabilized at a normal level.

simple anesthesia and the neural-therapeutic effect (see Fig. 1.5).

In neural therapy according to Huneke, "therapeutic anesthesia," "therapeutic local anesthesia," and the "nerve block" are not prime considerations. What happens here is something that goes far beyond local anesthesia and occurs only when the anesthetic strikes the diseased, pathologically altered tissue. This is precisely where we use the local anesthetic to supply a substantial amount of energy to the tissues, in order to help the cell to rebuild its electrical potential. In addition, the tissue-cell membrane is also stabilized by it. We are thus re-establishing normal bioelectrical conditions and the normal physiological conditions that depend on them. An essential part of this process is to reconnect the cell to the normal information exchange on which, as part of the whole, it depends. The change that occurs in the local energy situation has its effects on the whole organism via the cybernetic network.

The initial level of the membrane resting potential (MRP) of individual cells is not identical. If the cell is diseased, this can sink considerably without necessarily causing the cell to die. So, for example, a normal lung cell has a mean MRP of −15 mV (with a standard deviation of ±20 %). Lung cells in non-malignant disorders (such as pneumonia, bronchitis, tuberculosis) have an MRP of −14 mV ±20 %. Lung cells that have undergone malignant change may have an MRP as low as −9.8 mV ±3 mV. Healthy human cervical cells have an MRP of −33 mV, tumor cells about −22 mV. Some measurements obtained from tumor cells even produce positive values (Steinhaeusler).

It has been possible to show by measurements made in vitro of lung biopsy specimens with inserted electrodes that when a 1 % procaine solution is added to the physiological saline solution there is a rise in the membrane potential from about −15 mV to about −60 mV. This result was obtained in a number of tests but is not as yet statistically ascertainable, since these studies are still continuing. At the same time, it is intended to establish whether the observed effect is due only to procaine or to a pH shift. From this it is possible

to conclude that hyperpolarization of the cell occurs that produces changes in the cell's metabolism (ion exchange). Humoral regulating mechanisms reduce the concentration of procaine in the zone where it has been administered. As a result, the MRP sinks again to its initial value. If, as a result of improved metabolism, the sick cell succeeds during this brief period in getting rid of metabolic waste and toxins into the adjacent environment, this will allow the MRP and hence the functional shift back to normality to be maintained. "It is not difficult to imagine that small (local) hyperpolarizations can balance depolarizations of the same size," said Schadé. If this cannot be achieved, the MRP will sink back to its disturbed initial value. The theory that a procaine solution supplies energy into tissues is thus correct, since from a physical point of view the increase in the biological potential is possible only by greater order, and this is always linked to an increase in energy.

When the cell damage and the consequences it has produced have been repaired, the previously damaged excitatory process and the autonomic (neural, humoral, hormonal, and cellular) regulating function is restored as far as possible to all functional circuits. In other words, procaine therapy produces an electro-biological rehabilitation. Initially, it acts only locally, and after modifying the cell-environment system (Pischinger) it also acts on the whole of the organism. From the beginning, Huneke referred to a "change in the energy structure of the autonomic system." I would go further and call it the restoration of the normal structure of the autonomic system to the extent that this is still possible. Today, this includes a focus on positive changes in the basic system (the matrix).

The correct site for the injection is decisive, because this neural-therapeutic normalizing effect upon the neurovegetative system can be produced only if the injection strikes previously damaged tissues that can no longer recover by their own efforts. Procaine used as a local anesthetic forms a block; used in neural therapy it eliminates a nerve block that was previously present. This fundamental difference is the reason for the plea that the outdated term "procaine block" be used, if at all, only for the state produced in local anesthesia. If it is not, it is likely to continue to block the way to understanding the processes that occur in neural therapy. The fact that we need to repeat our injections whenever their positive effect begins to wear off suggests that the cell can at first retain the electrical potential supplied to it for only a limited time. But with every repetition it seems to learn more effectively to build up and maintain the required potential by its own efforts.

Thus, in disturbed segmental tissue and especially in the "interference field" we have zones of strong stimuli or the summation of stimuli over longer periods, which the body is unable for the time being to compensate, i.e., the organism finds them to be irreversible. In this state the cell becomes refractory, it no longer responds to external stimuli and withdraws from the continual information transfer and to some extent also from the higher-order cortical overall information system. Despite this, however, these zones do not remain mute. They fire off streams of irregular irritative impulses (Thompson, Kimball), which, in my view, have the characteristic ability to set up a disturbance. In doing so they inundate the stimulus-inhibiting and selective functional elements of the synapses and the "ubiquitous synapses" of the basic autonomic system. This roughly corresponds with Melzack and Wall's gate-control system theory.

Nerve fibers turn into synapses, into other nerve fibers, or they end at the motor end plates of muscle fibers. Synapses are switch-points where electrical signals are transformed into chemical signals. The information is carried across the synapses via transmitter substances, for example, acetylcholine. When the acetylcholine has completed its task it is split by the enzyme acetyl cholinesterase (cholinesterase). Procaine blocks cholinesterase, the excitability of the peripheral choline receptors, and inhibits the acetylcholine formation.

Synapses can have an exciting or an inhibiting effect. They can filter off individual subliminal stimuli and prevent their passage. Their function as pressure-relief valves causes some preselection amongst the irritative impulses and nerve signals that travel only in one direction. The loss of this synaptic function leads to the inundation of the system by stimuli. The interference impulses from disturbed tissues or interference fields probably also transmit false information in the segment or to higher centers, depending on how far they reach. Regulatory disturbances result, and finally there is a disturbance in the total environment of the organism. If weaker disturbances limited in range to the largely autonomous control circuits with neurovegetative functions act only within the segment, once certain limits of tolerance are exceeded a segmental illness results that we have to treat by accurately placed procaine injections into the relevant part of the segment.

But if cerebral centers are disturbed by even stronger excitatory streams that inundate all the synapses (or the gate-control system) and thus arrive unfiltered, a remote-disturbance illness is produced. For obvious reasons this will manifest itself where the environment, from hereditary or acquired causes, is weakened and is therefore more readily subject to disturbance, and thus where organs, tissue, and control circuits are particularly easy to throw out of a healthy balance by additional regulatory defects. Such an illness can be cured only by eliminating the interference field via the Huneke phenomenon or by the surgical removal of the focus of the disturbance. In my view, the intensity and duration of the pathogenic drop in the electrical potential compared with the normal level and the liability to

disturbance of tissues and organs determine whether and where a functional or organic disorder will occur, whether it will remain in the segment, extend beyond the segment to the same part or the same half of the body, or will leap beyond any territorial reference that we can recognize and manifest itself in some other part of the body.

In addition to using hyperpolarization during anesthesia to break out of the vicious circle of positive feedbacks, I therefore regard the following as the major points in the pathological processes and in the therapeutic effects of procaine to counter them:

a. Stimulus-related processes affecting the cell membrane potential, i.e., the lowering of the membrane resting potential by excessive stimuli on the one hand, and in therapy its restoration by means of procaine on the other. If a cell membrane is damaged experimentally, the cell's ion exchange can no longer be controlled by the surrounding environment. The neighboring cells immediately break off their (membrane conduction) contact with this "sick" cell. It is as if they were isolating themselves in order to protect themselves against being contaminated by its harmful influence. Being a surface-active substance, procaine can settle on these surfaces and make them impermeable. As a result, contact with the cell is re-established.
b. The production of stimuli triggered thereby and the channeling of these stimuli via the neurovegetative system, and the resultant negative or positive effects on the regulating mechanisms of this system. Life is bound to bioelectrical processes. The sympathetic and parasympathetic systems ultimately resolve in a common basic plexus and terminate in the mesenchymal interstitial tissue. The electrical impulses are then transmitted by means of special chemical transmitter substances (norepinephrine, acetylcholine etc.) to special receptors that, however, are doubtless also subject to some higher-order control and regulation.
c. The stimulus-related loss of the selective gate effect of the synapses and the resulting inundation by stimuli, leading ultimately to exhaustion as far as the reticular formation, and in reverse when synaptic function is restored and pathological ephapses are eliminated by means of procaine. This product supplies energy to the power stations of the synapses and enables them to resume their lost functions in supplying energy. According to the gate-control system theory the information-control gate is opened by activity in the small fibers. The C fibers respond especially rapidly to procaine and anesthesia then shuts the gate again. The equilibrium of activity in the large and small fibers is restored and the inundation of the reticular formation by stimuli inhibited. This also limits pain perception. If reflex vasoconstriction has led to ischemia, which then itself excites new pain receptors in affected tissue, procaine can dilate these vessels and so break through the vicious circle. The cybernetic interaction of physical and chemical reactions in the synapses and in what Pischinger has called the cell-environment system represents a refined arrangement of the organism in providing a fail-safe system for protecting the peripheral regulating functions, to maintain the bioelectrical potential at its correct level. We are able to intervene actively in these vital processes.

What Wedell found to apply to the injured nerve is likely to be true also for the interference field, with cells damaged by stimuli. By recording streams of neural impulses proximal to the injury he showed these to possess particularly penetrating and diffusing properties. Of special interest to us is the fact that in the region where there are injured nerves, pathological synapses can come into existence, so-called ephapses. These have all the characteristic features that we regard as prerequisites for interference-field activity, since they can lead to the pathological transmission of stimuli between otherwise well-insulated nerve fibers. In other words, in addition to the normal synapses there is short-circuiting of nerve channels and a transmission of information and unmodulated stimulus impulses on the wrong channels. Something like this happens if the insulation in the system is defective and we can hear another conversation when we use the telephone. Such short-circuiting across ephapses at points of injury has been proved experimentally for unmedullated fibers (Arvanitaki, Jasper, Katz, and others) and from medullated to unmedullated fibers (Granit).

The discharges resulting from injuries have a pronounced tendency to diffuse. They are apparently forced away at the ephapsis from the more sensitive A and B fibers toward the C fibers, and it is precisely these last that are especially sensitive to procaine. They then trigger off a state of excitation in the posterior-horn complex of the spinal cord by causing a primitive rhythmic excitatory activity (Harrer). This is where inhibition, channeling and summation occur, and where ever more functional systems can become involved in the pathological state of excitation. This provides a plausible explanation for the diffusion of stimuli that we find time and again to occur in disorders due to interference fields that have persisted for some time. Erbsloeh has written that:

> this corresponds to a phased rise in the shift of the main site of abnormal stimulus production from the level of the peripheral site of damage to the control-cell mechanism of the spinal cord and beyond, as far

as the intermediary neuron systems in the region of the thalamus. Hyperpathy, which may affect a specific region of the body or be unilateral, bilateral or generalized, therefore seems ultimately capable of continuing to exist independently from the rarefying process of the original focus.

Practical experience has proved to us that we can eliminate such pathogenic short-circuit synapses (ephapses) via the Huneke phenomenon, and that together with such false information and excitatory states we also get rid of the remote disturbances in the entire basic autonomic system for which they have been responsible.

d. The initiation of pathogenic processes due to the liability to disturbance on the one hand, and the increase in resistance and the reactivation of cells, tissues, organs, and their interdependent functions on the other.

This theory of the genesis of a large number of disorders builds on the successes achieved in practice and can be extended to new fields surprisingly often. So, for example, I see the action of neurotropic toxins as a pure interference-field effect. The interference impulses originating from the primary entry point are conducted via the nerves, inundate all the synapses (or according to Melzack and Wall's theory of the gate-control in the gelatinous substance of the spinal cord) and produce excessively strong stimuli in the cerebral centers. To me, "toxic effect" is primarily a result of an excessive response to a stimulus. The successful treatment of → snakebite and → tetanus by prompt treatment of the entry site with procaine seems to prove this.

Siegen has shown that it is reliably possible to prevent allergic necrosis in the Shwartzmann–Sanarelli phenomenon, that the antigen–antibody reaction is also controlled via neural channels and that any interference impulses related to it can be eliminated by administering procaine to the neural interference field. The problem of organ transplants has been solved by surgical techniques, but involving as they do the cellular, humero-hormonal and neurovegetative defense mechanism against the foreign body of the transplant, the high expectations of success still prove elusive. Immunotherapy is still one-eyed in its humero-seral views and has been unable to control the anaphylactic processes. To Siegen the transplanted organ is a classic interference field with a negative influence on the immunological processes that obviously also have a neural component that may to some extent even be dominant. This neural component can be influenced decisively by correctly localized procaine injections. According to Siegen, immunological assimilation of donor and recipient organism can be achieved only by observing the laws we have learned from the Huneke phenomenon and this assimilation is essential for permanently functional transplants.

The fact that a procaine injection suppurates only extremely rarely proves to me that tissues protected and returned to normality by procaine simply do not allow infection and → inflammation to occur. I am equally convinced that the development of tissue autarky known to occur in carcinogenesis (→ cancer) will be found to be made possible only if it is favored by an interference field.

This working hypothesis also provides a plausible explanation for the very wide range of indications for procaine therapy. We can use it wherever neurovegetative dysregulations lead to disorders. This is a very extensive field with a large number of diagnostic and therapeutic opportunities, but it naturally also has its limits. These theories are the result of experience and of experiments that require us to rethink some of what we have been taught. F. Huneke gave his first book the title *Disease and Cure: Another View* (*Krankheit und Heilung anders gesehen*). He meant this to indicate that in looking at illness from the point of view of neural therapy new ways of treatment have been opened to us.

My theory can be seen to receive support from an observation made by Descomps, who anesthetized the upper cervical ganglion and the retrostyloid region in 830 patients suffering from allergies. The treatment proved remarkably successful and the reactions were checked by EEG. He found that in two-thirds of the patients with allergic reactions, at rest and with their eyes closed, there was no sign of any alpha waves, i.e., that they were in a state of heightened excitation and fully awake. After anesthesia of the upper cervical ganglion of the sympathetic chain, alpha waves reappeared immediately, a fact that must be interpreted as a sign of central relaxation and reduced cortical activity. This permits the conclusion that following the anesthetic to this sympathetic → (T) ganglion the reticular formation and the cerebral cortex were no longer receiving the excessive number of autonomic and sensory stimuli that had previously irritated and overloaded them. It is well known that the reticular formation has the function of noting and classifying all stimuli and information received from the periphery and then coordinating the regulating mechanisms in such a way that the organism can at all times continually adapt itself to the internal and external environmental situation. If this control center becomes overloaded as a result of an excess of unfiltered incoming information, the mutual adjustment and balance of the various neurovegetative controls can be disturbed. Instead of acting as an attenuator or damper, it can then become an amplifier. Descomps could prove by striking hormonal, humoral, and neural reactions that correctly localized anesthesia quickly helps to correct these deviations and to guide them again into their regular channels.

8 Interstitial Connective Tissue and Interference Fields

The exact sciences and the art of healing are not hostile to each other, and final victory will not go exclusively to either. The ideal continues to be a harmonious relationship between the two.
Donzellini

In Austria, a research team of university professors and lecturers has come together, which set itself as one of its tasks the discovery and interpretation of the scientific bases for the phenomena of acupuncture and neural therapy according to Huneke. Professor Pischinger takes the view that the importance of the neurovegetative system in focal processes (Scheidt, H. Siegmund) has been overrated at the expense of the humoral "cell-environment system" (Pischinger). By "autonomic" the physiologist means only the action of the autonomic nervous system on involuntary muscles and glands. Even if one were to join F. Hoff and include the indirect influence of the endocrine system and all other regulating functions, this would still not suffice to explain the focal processes completely.

By "focus" Pischinger means chronically altered tissue areas that cause remote disturbances of a general and local kind. In his view, any disorder except infectious or septic illnesses can be due to "foci" and their cure prevented by such foci. We have only two objections to this definition: first, we believe that → infections and → sepsis can both originate and progress only if there are shifts of tissue potential due to or at least favored by interference fields; second, we regard Pischinger's extension of the term "focus" to include the interference field as apt to lead to confusion.

Scheidt wanted to apply "focus" only to such locally limited subacute inflammatory processes as can be clearly proved to act as foci that spread pathogenic material. He suggested the use of the term "disturbance field" where a region is disturbed (primarily or secondarily!). But since this word is ambivalent and does not distinguish between a field that is disturbed and one that causes a disturbance, W. Huneke suggested that the term "interference field" should be used only where a pathologically changed tissue region produces a disturbance via the nerves, i.e., when it causes a remotely located disease. We intentionally use the term "interference field" only for the much more frequently occurring neural pathogenic events, in order to avoid the connection that has become established in people's minds between "focus" and bacteria and toxins. Teeth and tonsils, for example, can become bacterial foci that can "spread" via the blood. According to Essen, this applies only in cases of acute rheumatic fever and acute diffuse hemorrhagic glomerulonephritis. But they tend far more often to become interference fields via the nerves when they become active in a pathogenic sense. In the case of a scar that is apparently completely "non-irritating" but that in reality produces a disturbance in some remote part of the body, we can be absolutely certain that we do not have a focus spreading bacteria, but a neural interference field. In other words, a focus is also an interference field, but not every interference field is a focus.

By the term "interference site" the measurable physical point is described, whence the disturbance effect of an interference field emanates. It omits the vague term "field" because it is not a field but a clearly defined site that emanates the disturbance. But the term "interference field" is widely known. Because everyone is familiar with its definition and to avoid confusion in nomenclature, the more precise term "interference site" should not be used.

The pathologist, Siegmund, subjected a circumscribed area of the rabbit ear to freezing. This produced permeability changes and trophic disturbances not only in the area of the lesion but also in remote parts of the body, and these in their turn could become the cause of pathological processes. Since neither bacteria, toxins, nor allergens could be made responsible for these, the definition of "focus" had to be reconsidered. The German Working Group for Focus Research reformulated the definition of focus in 1960 as follows: "By a focus we understand any deviant local changes in the organism that are able to trigger off remote pathological effects beyond their immediate vicinity." This is a change of course to our own view, since in this form it includes the autonomic nervous system as one of its channels of transmission. For the sake of clarity, however, we would prefer to have the focus continue to be distinct from the interference field, in its earlier sense of "diffusing focus" rather than in its latter-day sense of a center of nervous stimuli, in order to avoid any misunderstanding resulting from the terminology used. As matters stand, it is necessary to clarify one's use of the

term "focus" before discussing the subject. For Altmann, sensitization was still the essence of the focal theory as recently as 1982: "a focus is something that produces sensitizing material." But Siegen proved to us by showing that it was possible to suppress the Shwartzman-Sanarelli phenomenon with procaine that the sensitization processes are also subject to neural control. Our therapy interferes by inhibiting pathological reflexes.

Modern cybernetics also forms a convenient bridge in this case between these different viewpoints. They regard focus and interference field as being synonymous for similar processes that interfere with the regulating functions, the focus simply acquiring an additional capability to interfere that goes beyond that of its bacterial metabolic products. Both produce stress in the regulating systems. The signals emanating from them modify the regulating processes to such an extent that the course of the illness is changed by it (focus or interference field acting as factor of change). In the end, the strain imposed on the regulating system leads to local or general susceptibility. Any additional stress (Speransky's second insult) then acquires a pathogenic trigger function.

In Pischinger's sense the focus has two possibilities of interfering with the organism, either via the nerves or via the humoral channel. Pischinger refuses to see the neurovegetative system as the sole carrier of the

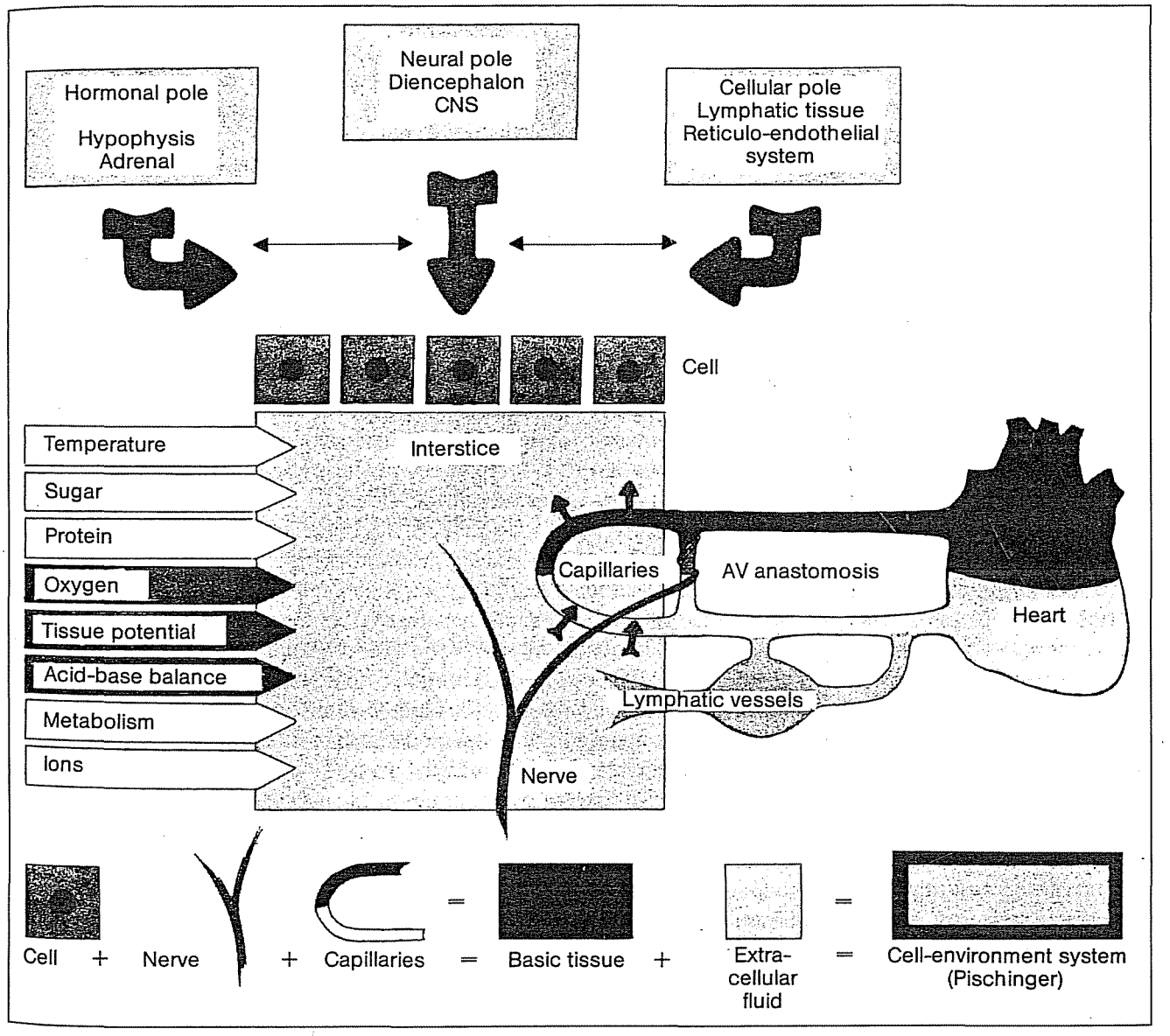


Fig. 1.6 **The basic autonomic system (cell-environment system) according to Pischinger.** The relationship of the basic system (connective tissue + nerve + capillaries + extracellular fluid) to the parenchymatous cells, the blood, and lymphatic systems, is shown diagrammatically; also its position within the whole of the organism with its relations to the well-known central regulating poles (hormonal, neural, cellular). The basic regulating system is a cybernetic bioelectrical energy system with the oxygen-reducing potential at its center. On this depend the oxygen balance and the acid–base balance on which all the other well-known functions depend in turn.

focal processes. If the autonomic nerves are followed to the periphery, the postganglionic fibers are lost in a large-meshed network of syncytially connected cells, the so-called conductive plasma. In this network, which is described as the neurovegetative end formation, there is no longer any differentiation between sympathetic and parasympathetic components. What is even more surprising is that it has not been possible to prove any direct connection to exist between this end formation and organ cells, not even by electron microscopy. Instead, unspecific interstitial "active" connective tissue (consisting of embryonic mesenchyma, the reticuloendothelial system, lymphatic tissue, and loose interstitial connective tissue, comprehensively also known as basic tissue or basic interstitial system) and intercellular fluid surround every organ cell. These two combine to form the so-called cell environment. This is distributed all over the body and acts as the intermediary between the specific organ cells, the capillaries and the terminal reticulum of the autonomic system. But it is anything but simply a mute filling material. On the contrary, it carries out very important bioelectrical regulating tasks, which are crucial for the functioning of the whole organism, and also for the interference-field effect and neural-therapeutic action.

According to Pischinger, it is in this "cell-environment system" or "basic autonomic system" (see Fig. 1.**6**) that all the primary regulating processes occur that make life possible. As medium for the oxygen, water, and ion balance the basic autonomic system indirectly produces the energy and all the other conditions essential for the organ cell to live. All external stimuli must first pass through the basic tissue before reaching the organ cell. As we have seen, the autonomic fibers have no synaptic connections to the parenchymatous cells. In order to act upon them, they form mediating materials (e. g., acetylcholines, catechins etc.), which must always first pass through the intercellular fluid. As they do so, they can be controlled and influenced by the environment by oxydization and reduction. The cell and its environment continually interact as regulators of each other, i.e., they react to physiochemical changes that they in turn are also able to influence (Kellner).

The neural, humoral, hormonal, and cellular control circuits act within each other like an intermeshed control system, in order to assure the energy metabolism with the oxygen-reducing electrical potential (oxydization and reduction) at its core. When the local regulating forces are overloaded by an overload at any point in the system, the other control circuits react in the same way in concert with them. The potential and the physiochemical environment on which all vital functions depend must be maintained at all costs.

According to Pischinger, the active connective tissue is also the seat of any inflammation, of the focus and of the interference field, and this is also where it acts directly to disturb and hinder regulation. When this environment is disturbed, organ function must necessarily suffer. Such tissue changes are equivalent to changes in the tissue potential, which then involve the whole of the undifferentiated autonomic tissue system. Pischinger and Perger (1974 and 1983) showed a change in the redox potential of the basic system in the case of chronic diseases and tumors. In 1985, Heine discovered that, in connection with these diseases, the proteoglycan pattern is changed as well. Due to water intake or water loss, any change in the pH value of the basic system causes a change in the pore size of the molecular sieve. If the strongly oxydizing local anesthetic is injected into such an area with a reduced potential and hence with reduced cellular respiration, then the normal functioning of the damaged cells is restored. Thus, a satisfactory explanation is available both for the wide range of possibilities that exist for interference fields to occur and for the equally far-reaching neural-therapeutic effects that it is possible to achieve in the opposite sense.

If the functions of the interstitial connective tissue are impaired by foci or interference fields, the defensive system is subjected to permanent stress and the defensive capability of the organism is thus constantly reduced. As long as this can still be compensated somehow or other, the body remains apparently healthy. If, however, the noxious effect of the focus or interference field on the basic autonomic system exceeds the limits of tolerance, the way is clear for functional disturbances or for objective pathological changes to occur, and as a result the organism will be predisposed to facilitate their establishing themselves. Once an organ's limits of tolerance have been reduced by earlier disease or hereditary predisposition, it is in the nature of things that pathological processes should all the more readily manifest themselves there. This explains why one and the same interference field, for example chronic tonsillitis, can in one case have no effect, in another it may merely produce a functional disturbance, or it may cause serious organic disturbances and changes in a wide variety of organs.

Every group of organic cells needs its own fixed oxygen-reducing potential and its own energy potential, in order to work normally. This potential influences the autonomic connective tissue and the blood, but the potential of different cells and organs also influences these cells mutually. A sketch (based on Stacher) shows the hypothetical reaction of the cell environment to a stimulus received by a healthy person (Fig.1.**7**) and by someone with a focus or interference field (Figs. 1.**8**, 1.**9**).

To summarize: an interference field or focus produces a change in the cell environment and hence in the reactive capacity of individual organs and of the organism as a whole. Where there is a hereditary or acquired

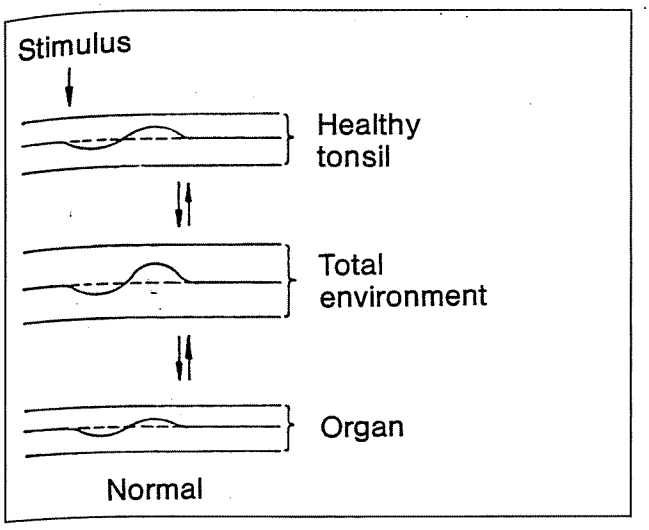


Fig. 1.7 At the top is shown, as an example, the position in a healthy tonsil, the total environment being shown in the center, and any organ at the bottom. The limits indicate the normal regulation or tolerance range within which no damage occurs. The total endogenous energy effect irrespective of origin gives the measurable potential. Under ideal circumstances this lies in the center of the regulation range (dashed line). If an exogenous stimulus (e.g., a major weather change) impinges on the organism, the total environment is altered and counter-regulation sets in. When this has worn off, the earlier state is restored. The organ environment also participates in these oscillations.

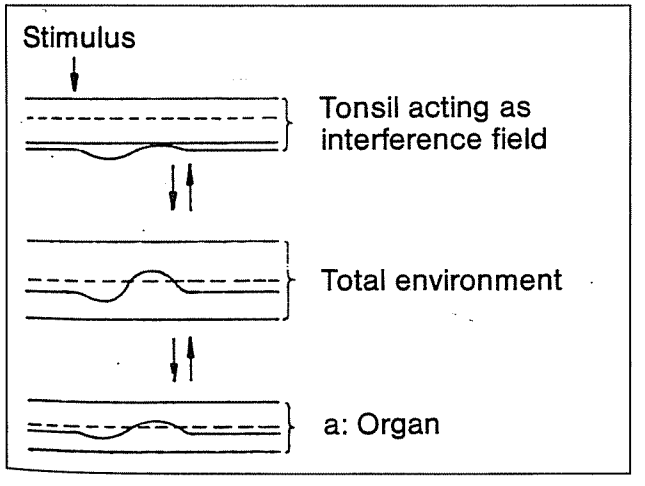


Fig. 1.8 Chronic tonsillitis blocks the tonsil's regulation and acquires the character of an interference field or focus, its environment lies beyond the limits of tolerance. It is no longer able to defend itself against exogenous stimuli, such as viruses and bacteria. The total environment is thus also changed but, on account of its inertia, to a lesser extent; even so, it is no longer in the preferred mid-position and the organism is subjected to stress by the constant need to compensate for the interference caused by the tonsils. Nor is the organ environment (a) any longer in an ideal state. If a stimulus impinges on the organism that is already under stress, the same oscillations will occur as in Figure 1.7 but in this case everything happens much closer to the limits of tolerance than in the normal, healthy body.

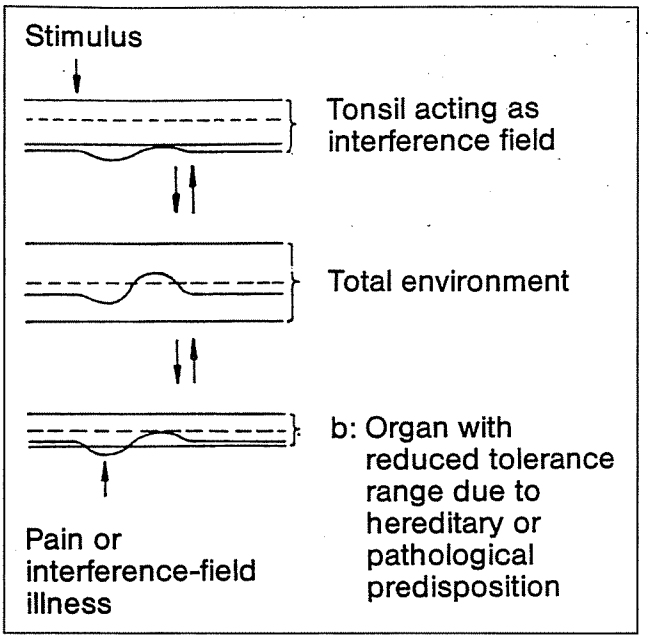


Fig. 1.9 If, in addition, the organ has a reduced tolerance range as a result of hereditary weakness or due to previous illness, the limits are exceeded and the functional or organic illness due to the interference field is able to manifest itself.

organic predisposition, this can result in illness due to an interference field or focus.

Changes in the basic autonomic system due to an interference field can be seen in the → blood picture. The blood picture is always a reliable mirror of the entire environmental situation. Where there is an interference-field or focal influence, we generally find that the blood picture shows granulocytopenia with relative lymphocytosis. After the interference field has been eliminated by the Huneke phenomenon or by treatment of the focus, all the pathological changes in the blood picture return to normal within a surprisingly short time. In this way, it has been possible for Pischinger to provide clear objective proof of the Huneke phenomenon. He made blood smears of patients in F. Huneke's practice, before and after a lightning reaction. As we know, the neural healing process in this is produced in a flash. For the humoral reaction to become demonstrable in the blood smear, following the profound change in the patient and restoration of the normal electrical potential, takes only 10 minutes! After this, depending on the original state and the reaction as such, significant changes can be shown to have taken place in the regulating system for the white blood cells. On the one hand, the neutrophil values tended toward normality, while the rise in the monocyte count showed the co-involvement of the reticulohistiocyte system. The number of lymphocytes remained unchanged, but there was a shift to the left in favor of small, healthy lymphocytes. Pischinger writes about the Huneke phenomenon:

> The normalization of the basic function centered on the bioelectrical (oxygen-reducing) potential and all its consequences in blood and tissue must also lead to the restitution of the specific and (where organs are involved) the organ-related functions at the point of maximum pathological reaction, so far as this is still anatomically possible.

The misgivings of orthodox medicine that the lightning reaction is simply the result of suggestion have thus to a large extent been invalidated by the results of Pischinger's research. The objective proof demanded time and again by Huneke has thus been provided, first by Pischinger and subsequently by others using different methods. We may therefore be confident that general recognition for the Huneke phenomenon can now be only a matter of time.

In these studies of the blood picture it was found that even the minor stimulus of a needle puncture through skin and vein wall for taking a blood sample was enough to produce a number of different reactions in the patients. In some cases, there were marked leukocyte reactions, in others there was no change or there were diametrically opposite changes in the blood picture. In order to record the initial excessive reaction and the subsequent flattening out of the oscillations in the corrected environment, the values of three blood samples were compared in each case, at 0, 60, and 180 minutes. In order to produce an identical stimulus and to obtain more clearly defined changes in the blood picture, Pischinger and Kellner went on to inject 0.5 mL Elpimed subcutaneously on each side of the body following the first blood sample.

a) The Elpimed Test (Kellner, Perger, Pischinger, Stacher)

Elpimed is a water-soluble, protein-free, fat-free extract of horse serum, prepared from specifically pre-immunized animals. It contains native substances with a high biological activity, in large-molecule polyunsaturated fatty acids. These substances are able to store oxygen, hydrogen, elementary iodine, and other substances. The blood of healthy animals (including the human being) contains these substances in a constant form; in the sick with a reduced defensive capacity they are substantially reduced. As we have seen, the body's reactive ability and defensive capacity depend on the state of its mesenchyme, which is interposed everywhere before the organ cell. Elpimed intensifies the unspecific defense and hence strengthens the interstitial connective tissue. It activates the undifferentiated organ functions and with them the neural, humoral, and cellular parts of the regulating system, and endogenous cell oxygenation is noticeably increased by its oxygen-reducing character, i.e., the vitally essential regulation of the oxygen metabolism in cells and tissues is increased. The increase in the defensive capacity of the whole organism is shown in the blood picture by a rise in monocytes and a drop in lymphocytes. This activation can go so far that it will break through the general blockage of the defensive controls and enable the regulating functions of the autonomic system to be fully restored.

Any stress that exceeds the limits of tolerance sets off a shock reaction in the autonomic defense system. This shock reaction is the system's defensive response. It is irrelevant in this context whether the stimulus is in the form of a chemical, physical, bacterial, or psychological irritant. Selye studied the non-specific reactions that occur from the hormonal viewpoint (adaptation syndrome), F. Hoff, the neurovegetative aspect (system of complete autonomic reversal). According to Selye, the autonomic system reacts to any overload by a state of alarm whose first phase is one of shock, followed by an anti-shock phase. According to Hoff, the first phase is the sympathetic and the second the parasympathetic phase of this total inversion. The shock phase causes a drop of about 50 % in the eosinophil level in the blood, calcium and cholesterol drop to or below normal levels, and the amount of magnesium increases. Elpimed acts in precisely the opposite sense and is thus exactly like the body's own anti-shock substances (Perger). It raises the calcium and cholesterol levels and lowers that of magnesium. Hence one can use it medicinally to induce the counter-shock or second autonomic inversion phase. This can be particularly useful when the state of shock does not abate by itself once the effect of the trigger stimulus has come to an end.

There could be no doubt that the difference in the reactions to the needle puncture and to the Elpimed test had to be dependent on the defensive state and reactive capacity of the patient and that this provided the opportunity of recording the patient's reactive state from the information provided by the changes in his or her blood picture. In carrying out these tests, a multiple stimulus is set that will produce a reaction in the pre-stressed organism to force the cellular, vascular, and autonomic systems to declare themselves, either jointly or severally.

At the start of the blood picture studies there were several values that could not be interpreted until Bergsmann drew attention to the fact that leukocyte values from a left and a right fingertip can show differences of up to 3000 cells in the presence of unilateral pulmonary processes. Interference-field and focal illnesses are frequently unilateral and then lead to humoral asymmetry. Bergsmann treated one patient who had a therapy-resistant irritative cough and produced a Huneke phenomenon following the injection of procaine to his tonsils. Before the treatment, the leukocyte difference in the blood from the fingertips differed by

3000 cells between left and right, 135 minutes later the cellular asymmetry was back in equilibrium! A check 24 hours later produced a normal picture. Accordingly, dysregulation first occurs in the environment at the site of the disease, then within the respective segment or quadrant and, when the effect is still greater, the whole side of the body may be involved. Only very strong interference fields that can no longer be compensated at the periphery lead to a paralysis of the regulating mechanisms throughout the body and thus produce the total autonomic inversion in the sense defined by F. Hoff. In the case of a unilateral paralysis of the regulating mechanism we often find a degenerative hypoergic reaction on the side of the interference field, whilst the other side compensates this by an excessive inflammatory or allergic hyperergic reaction. D. Gross reached the same conclusions based on experimental and clinical studies:

> In the healthy organism there is a functional symmetry, for example, of the arterial vasomotor system, of skin temperature, sweat secretion, trophism etc. This functional symmetry can be continually disturbed from the periphery via the nervous system, for example, by trauma or its consequences, by a scar or a chronic inflammation. An anesthetic to the 'irritation center,' the point of origin of the disturbance, can enable the organism to restore its functional symmetry and thereby the physiological normality of its disturbed functions. [center of irritation = interference field]

b) Iodometry (Pischinger, Kellner)

The perfect functioning of the bioelectrical processes is dependent on the presence of synapses. These determine whether and in which direction stimuli are transmitted further. According to Pischinger, the active interstitial connective tissue is a ubiquitous synapse for autonomic impulses. Intercellular fluid contains autonomic transmitter substances. Together with other substances, Elpimed also contains triple-unsaturated fatty acids (trienes), which are able to produce changes in the interstitial environment. The trienic molecules are affected by any change in the environment. They are obviously activated by situations where stimuli are present. Under normal load they have mean values that can vary individually in their range. In acute illnesses and in acute phases of chronic illnesses, there are substantial fluctuations about these mean values. Chronic irritations, on the other hand, allow the curve to flatten, in extreme cases to the point of complete reactive paralysis.

The triene is also activated by artificial stimuli. The extent of this reaction to a stimulus can be recorded on a graph by means of iodometry, since trienes also combine with molecular iodine at their free valencies. Their capacity for combining with this indicator substance can thus provide objective information on the state of the organism's regulating system at any given time.

Technique

A protein-free alcohol extract is first made from fasting-blood serum. The amount of elementary iodine dissolved in glacial acetic acid that can be transformed into free iodine or that will combine with the substances in the extract is found by titration. If 5 mL of blood is taken from each side of the body (2 × 5 mL), two further blood samples are taken 1 and 3 hours later and the three iodine combination values are compared with one another, three different values will generally be obtained for each side. The first of these will vary from day to day, and this may well be due to changes in the weather and the resultant stresses to which the system is subjected. The variations in the second and third values are the stimulus response by the interstitial tissues to the needle placed in the vein wall and in direct contact with the autonomic tissues. The microwound destroys and displaces tissue, a process by which very large numbers of autonomic fibrils are affected. The entire neurovegetative system immediately responds to this stimulus, and a little later the cellular and humoral systems are also included in the compensating process. The neurovegetative system, as it were, orders the appropriate cells and tissues capable of compensating the stimulus by energy-supplying processes to do so.

The graph (Fig.1.**10**) of the amounts of iodine adsorbed gives a good picture of the organism's reactive state when subjected to stress and of the way it compensates such stress. Increased iodine adsorption indicates an increase in the oxygen-reduction capacity and vice versa. According to Pischinger, this process takes place in the non-specific system, in what he calls the basic system. Every stress, whether chemical, mechanical, electrical, thermal, acoustic, or optical etc., always produces the same reaction in the cell environment. Blood plasma is the cell environment for erythrocytes and leukocytes. By means of the active oxygen-reducing components of the protein-free serum, iodometry enables us to record precisely those components of the serum that are subjected to the greatest changes when reactions to stimuli take place in the filtering interstitial material. As we have already stated, the humoral-autonomic reaction of the basic system always moves between oxydization and reduction. The way in which this change is effected seems to reflect the character of the autonomic reactive state and the way the system reacts. In iodometry Pischinger has provided us with a simple and cheap method for measuring changes in the oxygen-reducing potential, which is as good as using a potentiometer.

The iodometry graph for every patient shows systematic deviations up or down relative to the normal curve. The normal curve corresponds approximately to the shape obtained by Selye for the stress reaction. The less the patient reacts to the puncture stimulus for obtaining the blood samples, the more severely his or her regulating and defense functions are blocked. Elpimed tests and iodometry provide the clinician with the possibility of obtaining a number of highly significant statements from the organism. From these it is possible to determine whether one is looking at an acute or a chronic process, whether there is a longer or shorter delay in obtaining the reaction, and the extent of the patient's reactive range (i.e., whether the reaction is excessive, normal, or weak, or whether there is complete regulatory paralysis, e.g., as in the case of malignant growths). By comparing healthy parts of the body with those that are under stress due to a focus, the site of an interference field or focus can be determined with greater accuracy by limiting the area of the search. Thus, if the appendix is acting as an interference field, the Elpimed test will show on the right-hand side, which is both producing the interference and subjected to the disturbance, that there is an asymmetry in the basic values and in the whole reactive process, and that there is a limited reactive range that can be seen by comparing the iodine adsorption values for the six blood samples. The healthy left side will show a normal or even an exaggerated reactive process. In certain cases, this method makes it possible to determine the site of an interference field by further blood samples taken from different quadrants of the body.

Further, this test also shows whether neural-therapeutic treatment or the elimination of a focus has been objectively successful or whether and for how long further treatment may still be required. After a Huneke phenomenon, no more than half an hour may be needed for the iodine adsorption values, the cell changes in the blood picture and the humoral asymmetry to return to normal. This means provides objective proof that there has been a return to normal bioelectrical conditions after an irritant stimulus that has subjected the whole organism to stress is removed. This proof should be a conclusive argument not only for the convinced neural therapist!

Through the use of oxymetry, Pischinger demonstrates an additional way to present objective proof quickly and simply for the success of neural-therapeutic measures. This requires the quantification of the oxyhemoglobin content of the venous blood. A healthy person at rest has approximately 40% oxyhemoglobin; if internal organs are infected the numbers are 60%, 70%, and above. (Arterial blood has an oxygen saturation of between 96% and 98%.) With all consumptive processes (for example carcinoma) and progressive forms of inflammatory system diseases that produce

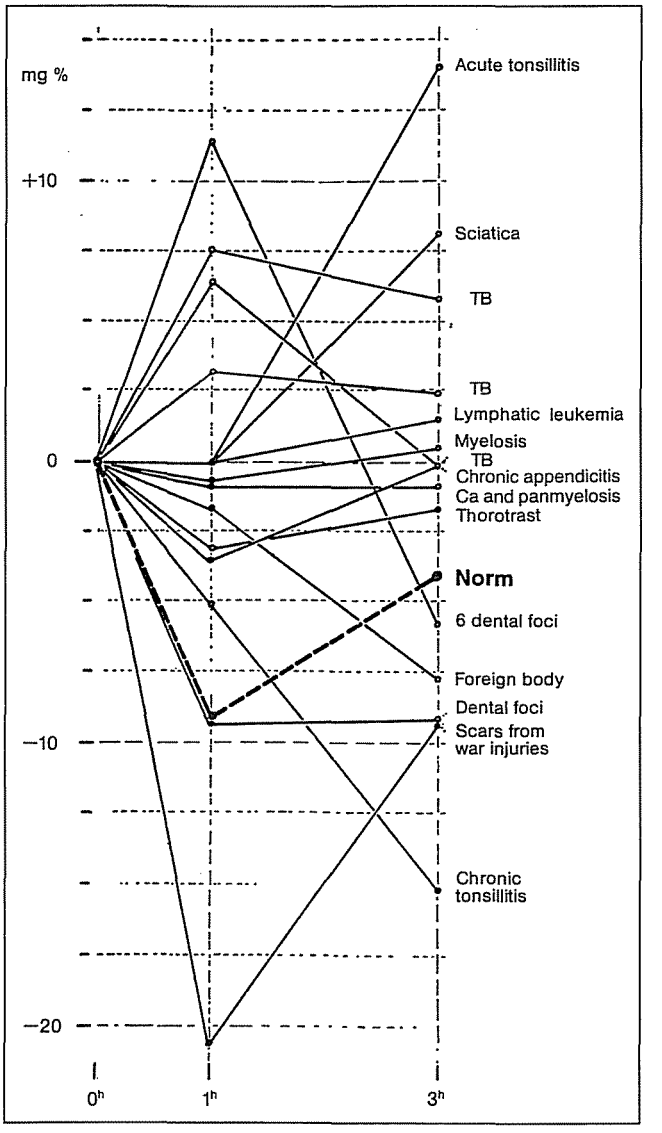


Fig. 1.10 **Reaction to stress following the removal of 5 mL of blood from the antecubital vein.** All initial values are 0, the deviations are shown at 1 and 3 hours as positive or negative values and as mg percent of iodine adsorption.
Source: Pischinger A. The basic regulatory system (Das System der Grundregulation). 3rd ed. Heidelberg: Haug; 1981.

considerable immune deficiency, the numbers drop far below the norm (down to 3%!). The greater the immune deficiency, the lower the oxyhemoglobin content! If the count shows regular values again, shortly after neural therapy, the removal of autonomic blockages in the segment or in the interference field is confirmed (Perger).

The studies of the Viennese team (Fleischhacker, Hopfer, Kellner, Pischinger, Stacher) also confirmed and explained a number of observations that we had already made earlier in the practice of neural therapy according to Huneke:

a. A physiological saline solution also produces a reaction in the blood after being injected, but by no means as profound as that obtained, for example, with procaine. In the case of the saline solution, the

reticuloendothelial system does not react in concert, and the potential and iodine adsorption remain unchanged. Kracmar confirmed by "neurovegetative electropolarimetry" that the polarizing capacity of procaine is substantially greater than that of a physiological saline solution. From an electrochemical point of view, this means greater ion content and thus a greater oxidizing effect.

b. In comparative studies of the reaction to a procaine injection, first into the pelvic region through the abdominal walls and then transvaginal into the pelvic plexus (Frankenhaeuser's ganglia), the laboratory values showed clear-cut differences. These prove that it is not irrelevant at what point in the regulating system our injection therapy is applied.

c. Focal provocation methods (such as Spenglersan, cutivaccine etc.) fail as long as there is any reactive paralysis. Thus, failure to obtain any reaction to provocation does not necessarily mean that there is no focus or interference field. There will be a reasonable probability of success in repeating the test only when the Elpimed test indicates that the reactive capacity has been restored.

d. After cortisone or phenylbutazone treatment, the defense mechanism is diminished and may reach the point of total regulatory paralysis. Other "regulation blockers" are all the psychopharmaceutic preparations, antibiotics and chemotherapeutic drugs, immunosuppressants, and cytostatics (Pischinger). Thus, any massive antibiotic and sulfonamide therapy weakens the immune systems. These drugs can be invaluable in an emergency; to misuse and abuse them for prophylactic purposes and for treating minor infections makes humankind ever more susceptible to disease and increasingly dependent on ever more powerful drugs.

e. The Huneke phenomenon is able to break through a regulatory paralysis. The iodine adsorption values that previously deviated from the norm return to normal within a very short period of time. Reversal methods (irritation therapy, Ponndorf's vaccination, blistering agents, venesection, the alternate use of insulin, and Elpimed, etc.) can also reduce regulatory paralysis. Here again iodometry can show us when the therapy-resistant shock phase has passed.

f. The eradication of a focus does not necessarily lead to a cure. Particularly after a focus has been active for a long time, the organism may be so disturbed in its basic functions that it no longer has resources of its own to break through the blockage. In such a case, further treatment must be given to produce the required reversal. Its success is again shown by iodometry. It is probable that Pischinger's reversible regulatory paralysis is identical with Speransky's concept of autonomy.

Ricker and Speransky regarded the vasal and neural factors as the underlying principle of all physiological and pathological processes. Selye placed the endocrine system in the center of his observations, regarding it as largely autonomous, and thus considered it in isolation. Pischinger believes that he has found the key to all vital and pathological processes in the humoral system. Each of them takes only a sector of the whole and places it under the magnifying glass of his specialized knowledge and particular interest. We owe all of them a great debt for new discoveries, knowledge, and progress. But in paying homage to such partial results we must not forget that the whole is greater than the sum of its parts and that the human being is a cybernetic system in which all the parts serve the whole only by acting in concert and mutual interdependence.

For Pavlov and his followers the cerebral cortex is the controlling organ that regulates all the functions in the organism and maintains reciprocal relationships to the internal organs. For them, illness is a general reaction by the organism as a whole to the effect of a pathogenic stimulus, which brings into disorder the equilibrium within the organism and its relations to the environment. Thus, the pathological picture is the result of the response to damage done by the stimulus and of the defensive measures set off by it. The nervous system is the principal actor in the pathogenic process, in the course that the illness takes and in its end effects:

> According to I. P. Pavlov, the extraordinary stimuli that are the cause and origin of any illness act as specific stimuli for the defense mechanisms which are intended to combat the corresponding pathogenic causes. The protective functions of the organism cannot be assigned to the function of the "reticuloendothelial system" or of a "physiological connective-tissue system," as is done by some authors, since these tissues, like all others in the holistic organism of the human being and the higher animals, are closely tied to reflex mechanisms and, as regards their activity, depend like all other tissues on the influences produced by the central nervous system. (Bykow and Kurzin)

In the chapter on control mechanisms (*Steuereinrichtungen*) in his textbook on *Clinical Physiology and Pathology* (*Klinische Physiologie und Pathologie*), Ferdinand Hoff wrote:

> In my view, these theoretical constructions disregard the fact that neither the nervous system nor the so-called capillary bed are biological entities which represent reality in isolation from each other. These systems, the nervous system and the capillary bed, are not independent facts existing on their own. They are no more than abstractions by which we mentally isolate a portion from the living unity of the organism, but which does not live in that isolation. By our analytical methods we separate them out of this living

entity, thereby destroying it, or construct them for ourselves by purely abstract thought processes.
The nervous and vascular systems occur only within the entity they form together with the cells and tissues, in a community which comprises physiochemical structures and body fluids. Life and hence illness are possible only because all these components form a single entity, and thus no theory of pathology is valid unless it is built on this entity made up of all its individual parts. Between these individual parts which, as stated, form part of the vital process and do not have any existence independently of it, there are intimate mutual relationships that, for the purpose of our schematic view, we separate into distinct functional groups or circuits. Within these functional circuits, humoral factors may act on the nervous system, as is the case, for example, with adrenalin acting on the sympathetic nervous system or with carbon dioxide acting on the respiratory nerve center. On the other hand, the nerves can also influence the humoral system and cause changes there. As we have seen, it is probable that fundamentally every neural stimulus acts on the reactive organ by means of humoral substances. Both neural and humoral influences can affect cell metabolism and, in their turn, changes in cell metabolism can influence other cells, the nerves or colloidal structures, such as the membrane characteristics. In this complete interaction of individual parts acting collectively within functional circuits and interlinked by mutual relationships, it is inappropriate to describe any single part or link as that which is always superior or dominant, i.e., the prime mover, and this applies as much to the nerves as it does to the vascular system, the cells and the physiochemical structures. By placing any single link in these inseparable processes in the foreground on its own, we fail to do justice to the unity and the ever renewed miracle of interconnected natural processes. Instead, such one-sided doctrines merely characterize the direction, the method, and the scientific point of view of the researcher who gives his special attention to what is only part of the process. When such doctrines are presented one-sidedly, we are dealing with dogmatic formulations that do not measure up to the fullness and variety of living nature.

W. Huneke commented as follows on the proposals of Professor Pischinger:

We are grateful to Pischinger and his team in Vienna that by the results of their research work on the cell-environment system and the basic autonomic system they have been able to provide scientifically accurate objective evidence and proof of the original biological phenomena of neural therapy, and especially of my brother Ferdinand's lightning reaction. Pischinger has shown us what happens and can be measured in this autonomic regulating system, from the moment of an accurately positioned neural-therapeutic intervention to the cure.
Many years of practice of neural therapy, however, lead us to regard the nerves as the primary factor in the intermeshed system of autonomic regulation of the whole. In one and the same case, for example, a chronic otitis media may have its origin and be curable via an appendectomy interference field, a migraine via an interference field in the pelvic region, and arthritis of the knee via an interference field formed by a finger amputation scar or the tonsils. Thus, in one and the same case there are three attributions made as between interference fields and the remote disturbances caused by them. In my view, these can be explained only by the neural system, i.e., by neural structures which probably almost always include central control stations, and these must obviously include the cell-environment or basic system (Pischinger).
For me, the localization and manifestation of the interference-field effect on individual organs and hence the therapeutic effect on them must pass via the neural system which stands supreme over the processes in the cell-environment system

Electron microscopy has expanded our knowledge with regard to the peripheral stimulus-conduction and stimulus-transfer systems. We know that in addition to the well-known functional and control systems in the spinal cord and brain stem there are equivalent peripheral biocybernetic systems. The terms "center" and "periphery" have thus been given new meaning. Life is cybernetically self-sustaining and is dependent on the formation, modulation, and maintenance of the bioelectric potential. The whole of neurovegetative regulation at center and periphery, in its neural and humoral components, ultimately serves the main purpose of all regulation and control, namely to maintain certain bioelectric potentials. Modern cybernetics will help to move many things into their proper place, and medicine will be no exception. Fig. 1.**11** shows the cutaneovisceral reflex channels as explained by Hansen and von Staa.

As a result of cybernetics, disputes on matters of nomenclature, over focus or interference field, and on what plays the leading part in biological processes, have become pointless and a mere interlude in the history of medicine. For cybernetics has shown the common denominator of the bacterial dissemination focus and the neural interference field. Both weigh so heavily on the self-regulating and intermeshed systems that

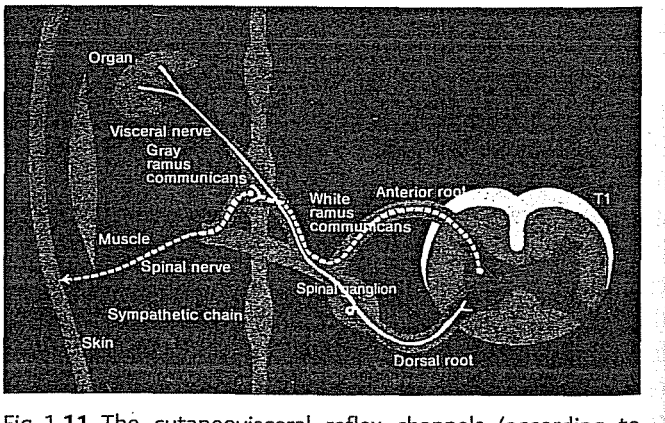


Fig. 1.**11** The cutaneovisceral reflex channels (according to Hansen and von Staa).

general or local susceptibility results. The bacterial metabolic products merely provide the focus with additional possibilities for causing disturbances. Any additional stress placed on the regulating systems already subjected to this stress then results in illness. It is the physician's task to uncover and eliminate this stress, in order to restore the physiological relationships to normal. Neural therapy as a "regulating therapy" offers a means of doing so by acting on the causes.

Biological systems are dense networks and are subject to a steady state. This refers to the balancing of physical dimensions that constantly receive energy. The systems are energetically open, allowing them to exchange energy and matter with their environment. This requires an information network that works quickly, reliably, and reaches every part of the system. In addition to the nervous system, this is achieved by Pischinger's basic substance (1945, 1974). As we saw above, it fills the entire intercellular space of the organism and unites the 50 billion cells into an entity and quickly passes on information about all processes involved.

c) The Proteoglycan Network

In the basic substance, between nerve ending and cell membrane, the biochemist, Rimpler, found a three-dimensional grid made of proteoglycans (protein substances with sugar side chains) and structural protein (collagen, elastin, and fibronectin). Histiocytes respond to all incoming information of the basic system with the immediate formation of an individually adapted proteoglycan network. If necessary, this network can be quickly broken down by macrophages. According to the research of Professor Heine, this signifies an enormous expansion of the information network known to this date! All cell surfaces are covered with a cell and tissue-specific sugar layer, the so-called glycocalyx. It connects the basic substance directly to the cell membrane (H. Heine). The ion channels connect the basic substance to the inside of the cell, to the cytoplasma, and the organelles. As a result, all cells are interconnected and influence each other. In addition, via microcirculation they are connected to the blood circulation, the lymphatic system, as well as to the nervous system. This is the anatomical and functional basis for holistic medicine.

Due to its high sugar content, the proteoglycan network has a negative charge. It can adsorb and lose water while forming a molecular sieve with changeable pore size. When it reaches a certain size, molecules and charges get caught in it. If, for example, stimuli change the pH value of the basic substance, water is adsorbed and the pores of the sieve get smaller. In doing so, it acts not only as a transportation system for the metabolism and a means of cleansing and nourishing cells, it also acts as a filter for humoral information. As a result of its negative charge, the network is able to exchange univalent for bivalent cations. The basic substance regulates through ion exchange iso-ionia, iso-osmia, isotonia, and thus, the maintenance of the vital homeostasis of the organism. Every irregularity in the homeostasis and change in the basic substance causes potential fluctuations. Via feedback with cells and nerve endings, it always causes the fibrocytes to form a newly adapted proteoglycan network. Potential changes are also transferred onto the glycocalyx of the cell membrane. If they are intense enough, they initiate a depolarization, which causes a cell reaction. The information circle is closed with the response about the processes in the cell-environment system through the vegetative nervous system to the vegetative centers. Pathological mis-information causes the fibrocytes to form a faulty basic substance, which in turn causes disturbance of local regulation. This may lead into a vicious circle and pathological development. Interference fields, foci, and other chronic strains that cannot be eliminated change the extracellular fluid and disrupt the dynamics of the basic system. Dysregulation might be the consequence.

In 1983, Pischinger and Perger were able to show dysregulation of the basic substance in the case of acute and chronic diseases (such as tumors). In 1985, Heine discovered in this context basic substance which was not structured in a known physiological way with changes in the proteoglycan network. This leads to the assumption that diseased tissue is no longer connected to the entire information system. Professor Heine complemented and confirmed Pischinger's findings, which supports the basics of neural therapy and other holistic therapies.

In 1991, the German cellular physiologists, Professor E. Neher and Dr. B. Sakmann received the Nobel Prize in medicine for their discovery of cellular ion channels and their functions. They developed a technique that made the tiny connecting channels in the cell membranes visible. In these channels, metabolism, information exchange, and transmission of regulating nerve signals between the cells and the intercellular fluid (matrix) takes place. They were able to measure the ion flow that was created in this context. The flow is the size of a billionth of an ampere and lasts a thousandth of a second. It also regulates the vital processes in the cells.

Through the confirmation of the existence of the ion channels and their function, older theories of holistic medicine were given scientific verification. It also provides new insights into the functioning of regulation therapy with the use of therapeutic local anesthesia on a molecular level. Many diseases are based on disturbances of the intercellular ion flow, and thus, disturbances of information and regulation that are of particular importance to us.

B

Neural Therapy According to Huneke

1 Brief History of Neural Therapy According to Huneke

What is most difficult of all? That which seems easiest to you: To use your eyes and see what plainly lies before them.
Goethe

Three hundred years ago, Newton saw an apple fall from a tree to the ground, a perfectly everyday event. But his genius saw more behind it and his reflections led him to formulate the law of gravity. A major part of physics and astronomy is still based on his discovery. James Watt saw how steam made the lid of the kettle dance; his genius led him to apply his discovery in the invention of the steam engine. With this invention a new epoch had dawned for the whole of humankind. Obviously, one could simply say that the time was ripe for this revolution and that the apple and the kettle simply provided the final nudges for grasping the ideas that were already in the air and to think them to their logical conclusion.

The history of modern neural therapy also begins with such an accident, if an event that began a new chapter in the history of medicine can be regarded as an accident. On three separate occasions in their lives, the brothers Ferdinand and Walter Huneke observed something substantially new, things that perhaps other doctors before them had also seen, without, however, seeing anything behind what was happening before their eyes. This is especially true of the lightning reaction described by F. Huneke (the so-called Huneke phenomenon). How many dentists must have seen how a variety of illnesses suddenly vanished in front of their eyes as they extracted a tooth, and thought no more about the matter? Even Leriche, 10 years before Huneke, wrote that, following a local anesthetic into a scar, he had seen pain disappear from another part of the body, but failed to emphasize this observation or to draw any therapeutic consequences from it.

The first occasion on which the two brothers witnessed something of importance was in 1925, when they found that their sister's migraine suddenly vanished, though previously it had proved resistant to any number of attempts to treat it. An older colleague had advised Ferdinand to try the drug Atophanyl, which had been developed for the treatment of rheumatism. The next time his sister had an attack, he gave her an intravenous injection of this product and, to his surprise, the migraine and all attendant symptoms including severe depression vanished in front of his eyes, dissolved into nothing. It was clear to him that this was not merely a matter of the suppression of pain, much less the effect of suggestion, but a genuine cure. Together with his brother Walter, he soon succeeded in establishing the cause of this surprise effect: two forms of Atophanyl were on the market, one for intravenous use and the other for intramuscular injection, the first of them without and the second with the addition of procaine, for painless intramuscular use. F. Huneke had overlooked the warning printed on the preparation containing procaine, which was supposed to be restricted for intramuscular use, stating that it must on no account be given intravenously, for at that time it was feared that procaine given intravenously could have fatal cerebral consequences. But it was precisely this addition of procaine, as Walter could demonstrate by comparing the effects of injecting the product with and without the procaine additive, which had produced the cure. Thus, his mistake had shown that, apart from its use as a local anesthetic, procaine could also be used as a therapeutic drug. How many doctors are using procaine or lidocaine every day without realizing or admitting that they owe the Huneke brothers this substantial extension of their therapeutic armory?

The second time the two brothers saw something new they did so independently of each other. First it was Walter who found that he could occasionally cure patients instantly of such disorders as headaches, dizziness, partial deafness, insomnia, and Jacksonian epilepsy, simply by giving them an intramuscular injection into the deltoid muscle. On another occasion, Ferdinand gave a perivenous procaine injection to a patient with poor veins and headaches, and obtained the same result as he could normally produce with an intravenous injection. The brothers concluded from this that procaine was capable of acting not only by resorption via the blood stream. The speed of the reaction, even when the injection was not given into the vein, led them even at this early stage into believing that some kind of electrical process might be at work via the autonomic pathways. They published the results of their joint studies in 1928, with the title *Unbekannte Fernwirkungen der Lokalanaesthesie* (*Unfamiliar Remote Effects of Local Anesthetics*). They added a small quan-

tity of caffeine to the procaine, in order to detoxicate it further. This also provided a bonus in making the preparation even better tolerated and enhancing its therapeutic effect. The German pharmaceutical firm, Bayer, then brought this onto the market under the trade name of Impletol.

From 1925 to 1940, the Huneke brothers practiced what they described at that time as "therapeutic anesthesia" and what we now know as "segmental therapy." In other words, they used Impletol with excellent results in the treatment of painful conditions and other pathological symptoms at the site of the disorder. They attempted, in a purely symptomatic approach, to balance dysfunctions in the synergetic state of the autonomic system by dealing with them on the surface of the body and allowing the treatment to act via the reflex zones and their associated nerves within the segment. They had many successful cures, particularly in cases of rheumatism, sciatica, lumbago, inflammations of the joints, partial deafness, eczema, angina pectoris, asthma, otitis media, disorders of the stomach, the liver, the gallbladder, and many others. In this type of treatment, the healing process is produced along the pathways trodden by medicine since its beginnings, by the use of heat or cold, massage, counter-irritants, and acupuncture. But Impletol has proved time and again that it is able to produce a particularly effective and widespread therapeutic stimulus.

On the third occasion it was F. Huneke who, in 1940, witnessed something so new and revolutionary that it directly placed a large question mark over conventional views on the origins of a large number of disease processes. A woman came to him with capsular arthritis of the right shoulder. This had until then resisted all attempts at cure. The then current view was that a "focus" diffuses bacteria and toxins via the bloodstream and that these caused such painful conditions. As a result, most of her teeth and her tonsils had been removed. Now the surgeons proposed amputating her left leg, since this was believed to be the site of the focus. Thirty-five years earlier, while still a child, this patient had had osteomyelitis of the left shin. Huneke now injected Impletol intravenously on the affected side, placed weals (intradermal blebs, quaddles) around the joint, gave her peri- and intra-articular injections and also injected the stellate ganglion. All these injections had helped in similar cases in the past, but this time they proved ineffective and Huneke had to discharge the woman uncured.

Fortunately, a few weeks later, she came back to him, because the whole region around the old osteomyelitis scar had become so inflamed that she was seriously incapacitated. Huneke now wanted to treat only this inflammation over the tibia, by means of quaddles. This provided the occasion of his first lightning reaction, as it were in a double-blind trial: suddenly the shoulder pains on the patient's other side disappeared without trace and she could again move her arm without pain. By treating the leg scar Huneke had permanently cured the shoulder joint. Huneke wrote about what had occurred as follows:

> This experience was so startling that I could have no doubt that I was looking at a fundamentally new piece of knowledge and that I was on the track of a hitherto unknown law in the field of focal processes.

This was proof that a "neural interference field" can act as the trigger for an illness that may manifest itself at a remote site in the body. It also proved that in such a case toxins or bacteria could not be at work, since it was hardly likely that they should be able to disappear so completely in an instant. A far more likely explanation seemed to be that the chronic inflammation of the tibia had in this case acted as an interference transmitter, which made use of the nerves for diffusing irritating impulses that had initially merely caused interference and finally become pathogenic. These had on this occasion produced a chronic inflammation in the reactive organ represented by the shoulder joint. The injection of Impletol into the interference field had then eliminated not only the interference transmitter but also all the pathological symptoms caused by it, instantly and totally. By this selective thrust into the neurovegetative system at the site of the cause, the body's rule of law and order, which had been disturbed, was again restored, as if it had acted as an appeal of the whole organism to the organ causing the disturbance.

Once one is aware of these relationships, it is not difficult to understand why so many disorders are bound to be therapy-resistant. Let us take the example of gallbladder disease: we all know that at least a third of all sufferers from this disorder find that their old complaint returns after technically perfect surgery; this is generally diagnosed as due to adhesions. However, if the cause of the illness is not in the gallbladder at all but, for example, an interference field in the pelvic region, surgery of the gallbladder will not remove it and thus it can simply continue to act as the pathogenic cause of the remote disturbance. As a result, in such a case, despite the surgeon's efforts, the complaint smolders on inexorably until it has ultimately involved the liver, stomach, and all neighboring organs in the morbid process. In this event the abdomen can settle down only when a procaine injection has eliminated the cause, i.e., the interference field that, in this particular case, happens to lie in the pelvic organs that are producing the disturbance.

The large number of cures of hitherto incurable cases obtained via the lightning reaction is the best proof that Huneke's thesis is fundamentally correct. In analogous fashion, what has just been stated also ap-

plies to the majority of all chronic disease, to gastric ulcers and liver complaints, to abdominal disorders, and the whole gamut of the pathological processes of rheumatism and neuralgia, in a word: for all kinds of organic and functional disturbances. Huneke has summed this up in his principles as follows:

1. Any chronic disease can be due to an interference field.
2. Any part of the body can become an interference field.
3. The injection of a local anesthetic into the responsible interference field will cure the disorder due to it, as far as this is still anatomically possible, by means of a lightning reaction (Huneke phenomenon)!

2 The Art of Healing and Orthodox Medicine

Research in the exact sciences is bound to lead to materialism, but the art of healing is equally bound to lead to victory over it.
Bavink

In practice such idealistic criticism of scientific medicine must inevitably lead to sheer empiri- cism and a purely practical approach, but in theory to unscientific work and mysticism.
Loether

As doctors, every one of us is the child of his or her alma mater, where we learned to think in strictly scientific terms. Orthodox medicine has provided us with the tools for helping our fellow human beings and has given us many items of information and knowledge on our way; down to the smallest detail we owe these to medical research. To be capable of teaching, research must try to dismember the whole and to make the parts measurable and comprehensible, i.e., capable of objective proof. Its efforts, which deserve full recognition, consist in adding each individual result to a stack of others until a whole is obtained. Well over 2000 years ago Laodze recognized that "the whole is greater than the sum of its parts," and Ferdinand Huneke complemented this when he stated that "measured by the yardstick of living matter all science is merely peripheral. But illness is living matter transformed and its being cannot therefore be fully comprehended by means of inanimate methods of exact scientific research concerned only with separate aspects of the whole." Siegmund, a pathologist and great friend of neural therapy, once said that "a dead body is incapable of making any statements about living matter." Living matter is bipolar. The inanimate components and the electrical structure of the neurovegetative system can be accurately measured and understood rationally by means of logic. But the comprehensive, holistic controlling forces inherent in living matter and that give direction to it cannot, or perhaps not yet, be measured. Yet these forces manifest themselves in the healing phenomenon of neural therapy, especially in the Huneke phenomenon. As long as this very real force evades our rational comprehension, medicine cannot become a science like mathematics or any of the other scientific disciplines.

Originally, the term "science" implied the well-4ordered whole of all knowledge. This universal sense was abandoned in the 19th century in favor of the mathematical scientific method. Mechanistic and materialist ideas increasingly forced their way into the medical sector. Progress in every field and the triumph of technology seemed almost to require medical thinking and action to change over to the same scientific accuracy, if medicine was to be seen to keep in step with progress. Only what was measurable, comprehensible, and explicable could be regarded as real. The cult of the demonstrable objective proof has in the end turned physicians into little more than technicians who are to a greater or lesser extent experts in the diagnostic machinery available to them. For them, it is the illness that occupies the center of the stage, no longer the sick human being. However, their efforts cannot go beyond the point where the processes in the living organism are no longer quantifiable and cannot be understood or explained in scientifically precise terms. The medical researcher has to try to discover the rules governing cause and effect. He or she wants to know how it all works.

Physicians in their daily contact with the sick, and the sick themselves, doubtless benefit from this research. General practitioners are only ever faced with the individual patient. For them all that matters is to reach a point where whatever they do works and helps their patients. The important point for them is not how but that it works. Both these basic attitudes are absolutely necessary and have an equal right to exist. Cures that cannot be understood and explained by the means currently in vogue in anatomy, neurology, physiology etc., should not be something met by head-shaking and resistance by often over-conservative official medical doctrine; on the contrary, they ought to provide the requisite stimulus to further research. Doctor and patient find these positive if still inexplicable reactions a source of new hope. Research ought to see its task in throwing new light on the relationships on which these new therapeutic possibilities rely, in order to allow them to be used as widely as possible.

A knowledge of the parts is doubtless necessary. But this does not give exact research the right to claim that it and its knowledge of the inanimate components make up the whole truth, that it and they alone are

valid. Too much dead knowledge can all too easily blur our view of the living whole. At the German Congress for Internal Medicine in 1963, Professor Heilmeyer stated that "thanks to the achievements of modern medicine we are now in the happy position of being able to diagnose about half of all disorders and to cure about half of these." "Knowledge is power," said Bacon. If so, then does the knowledge offered by modern medicine as taught at our medical schools consist of 75 % powerlessness? I am thoroughly unhappy over the fact that modern, rational, materialistic medicine, with all the immense amount of knowledge at its disposal and the impressive financial, technical, and human resources at its command, should be able, at best, to cure only about 25 % of all disease. As a practicing doctor, what can I do for the remaining 75 % that orthodox medicine, with what are mainly suppressive and substitutive measures, has to admit it cannot help? They are all back in my waiting room after doing the rounds of specialist, hospital, university clinic, sanatorium. At best, some of them will at least have had a mellifluous official label attached to whatever they may be suffering from, as it were as a decorative flourish to the diagnosis.

In 1961, under the title of *Medicine in the Crisis of our Time*, Professor Jores wrote: "The shattering fact that in modern medicine there is no treatment of the cause for most of the sick can allow of only one conclusion, namely that such medicine must be based on a fundamental error." For the neural therapist, this error lies in the principles of orthodox medicine as taught at our schools, which are in urgent need of reform. In tying itself so intimately to principles for which objective proof is possible, this medicine has fettered itself. As a result it has become petrified as descriptive medicine, with a limited range of competence. In scientific terms, treating the cause demands the ability to offer a complete explanation of cause and effect. To do this, it is necessary to dissect the whole into its parts. But the processes that occur in the living organism can be measured and subjected to objective proof only to a very limited extent. Disease and healing are processes in the indivisible living organism and can therefore be only partially understood by the methods practiced in our schools. The basic autonomic system, omnipresent in the organism, which alone unites the parts into a living whole, is the center of our attention, interest, and efforts. It is the carrier of life, and its pathways are the pathways of illness and back again to health. It is precisely this system that has been made the poor relation of orthodox medicine, because it cannot be dismembered, subjected to objective proof, poured into a retort! In attaching too much importance to pathomorphology, the functions and the idea of regulating systems have been neglected. This was bound to end all too often in therapeutic resignation.

The causes of many problematic diseases of our time including vegetative dysregulation in its manifold forms of appearance, rheumatic diseases, immune deficiencies in regard to infectious diseases, allergies, polysclerosis, cancer etc., cannot be found because they are not measurable by linear causal means. Their development is based on multi-causal factors that differ from patient to patient and that influence and exponentiate each other. Only the disease symptoms are fought because a causal therapy has not been established. In order to mobilize and strengthen the body's blocked defense and self-healing functions, causal treatment of vegetative misregulations has to locate their cause in the reciprocal dynamics of biological systems. For us this means influencing and adjusting the functions of basic regulation so that they show normal responses to all types of stimuli. We can achieve this by using the body's own systems for the biological treatment of pathological conditions:

> Apparently the laws governing the effectiveness of procaine therapy correspond less with the self-contained textbook type of clinical picture of definitive anatomical changes. Instead they seem more to belong to a developmental stage within the pathophysiological process which produces symptoms but which has its proper place between that of a trigger stimulus and that of organic manifestation. It is in fact very tempting to assume that what one is dealing with here are primarily autonomic stimuli and reactions. (Althoff)

Neural therapy according to Huneke is still to some extent regarded as part of empirical medicine with its fringe methods. Nevertheless, empirical medicine is a genuinely holistic medicine based on observation. Thus, neural therapy records and processes the response by the whole of the autonomic nervous system to the procaine stimulus, which, when correctly placed, becomes a healing stimulus. Whether it can in every case be subjected to objective proof is of secondary importance to us. Such a statement is not made out of defensive pique, but simply to show objectively where we stand, and also to demonstrate that this position is primarily therapeutic and only secondarily concerned with theory.

Young doctors who come from university and go into practice do so initially with a sense of elation that they are now able to diagnose and hence to treat practically everything that may come their way. Sooner or later they become conscious of the limitations and how tightly they circumscribe them. Most doctors become resigned to this and accept the inevitable by being satisfied with practicing the art of the possible. They prescribe whatever happens to be the latest drug as recommended in the publicity provided by the pharmaceutical industry and are certain that they can write their prescriptions with an easy conscience and without risk, being covered by the broad backs and ample skirts of the industrial giants. True doctors who still

seek to achieve an inner satisfaction from being able successfully to treat their patients will, as their experience increases, feel their therapeutic impotence in the face of the overwhelming majority of illnesses to be oppressive and unsatisfactory. They will therefore seek ways and means that hold out a promise of success and will find themselves forced to turn to methods that they were not taught at medical school. As a result, they turn to some extent into an outsider. But this does not mean that they must immediately be regarded as bigots who, with blind fanaticism, chase their mystical wild geese, nor do they need to lose touch with the scientific ground under their feet. Ethics are determined by conscience and not by universities: "The good physician has always used whatever practical experience has shown to serve the good of the whole, quite regardless of whether a scientific explanation could be found for it" (L. von Krehl). Practicing doctors would welcome it if their colleagues in research and teaching included more of the observations of empirical medicine in their research programs and academic syllabuses.

Practical experience in medicine results from experiments in vivo, and all research begins with observation and experiment. Science that does not recognize observations only because they do not fit into a currently accepted ideological framework fails to fulfill its purpose. Where only the linear causal relationship capable of objective proof is valid, the functional reality based on mutually interacting causalities must remain an equation with too many unknowns that cannot therefore be solved. The dermatologist, Unna, once said: "Science may bridge the gaps in our theoretical knowledge, in order to catch up with the lead that practical experience has over theory." Orthodox medicine spent many decades simply repeating its demand to the general practitioner Huneke to prove his assertions, so that they might be checked and perhaps even recognized. In practical terms, this was equivalent to a total refusal to recognize that empiricism has something of value to offer. A general practitioner is normally quite incapable of working out the requisite fundamentals and is thus unable to present his or her evidence. Siegmund made the statement that "neural therapy has entrusted an important task to science." To date, science has not taken up the challenge. We have every comprehension for a certain skepticism with regard to any method with a suspiciously broad spectrum of indications, but we must nonetheless ask why, to be consistent, the schools do not also withdraw their recognition, for example, from psychotherapy and physiotherapy. For these are likewise neither more nor less than holistic empiricisms and cannot by any means always be proved satisfactorily in objective terms.

The materialist, Virchow, once wrote: "These attempts to steer under full sail toward a 'rational' pathology and therapy, where 'rational' is taken to mean whatever may reasonably explain appearances, are rather like the attempt of Icarus." A few lines further on he talks about a reform "which will in the end exchange the rational or physiological position taken up hitherto for the empirical standpoint in therapy. Only then will therapy begin to develop like any of the sciences, for all science begins with empirical observation."

It remains a debt owed to the Huneke brothers that by their teachings about the lightning reaction they have led our generation of physicians back from the parts to the whole, by proving to us that there is a higher-order directing and ordering principle within us that cannot either be measured or grasped, but which nevertheless helps us to heal the sick if we learn how to address ourselves to it. If we want to practice the art of healing in Huneke's sense, we need to learn to think not only as scientists but also as artists.

For a time, technical development and specialization in modern medicine cast the family doctor in the part of the provider of emergency and first-aid treatment and counselor, but above all as the intermediary for referrals to a specialist. In the train of this return to a holistic approach to illness and therapy, neural therapy according to Huneke has especially helped the general practitioner and the doctor in peripheral out- and inpatient hospital facilities to reconquer his or her territory of responsibility, at the center of all medical activity. And as general practitioners have themselves become more successful in treating their patients, so their position has acquired a higher value and they have become more important in the patient's eyes. We have Huneke to thank for this, and the most effective way we can do so is to carry his teachings out into the world conscientiously and undiluted.

The representatives of orthodox medicine at first mocked the general practitioner F. Huneke as an eccentric, when he and his brother reported their astonishing cures and even went to the extent of interpreting them as electrical phenomena. Today, everyone knows that life is bound not only to material things but also to electrical energy. We have meanwhile also discovered how rarely it is possible, in a form capable of explanation, to discover any direct relationship between cause and effect in pathological processes, how much more often we are in fact faced with a complex reciprocal and interacting causality in which cause and effect can no longer be isolated from each other because they form part of a multitude of intermeshed regulating mechanisms: "Ferdinand Huneke discovered cybernetics long before the dawn of the cybernetic age" (Mink). The battle mounted against him was not always objective. His excessive reactions to the arguments leveled against him were not always designed to build bridges. In this respect he was not unlike his predecessor C. L. Schleich. If F. Huneke had been less imbued with his mission, he could hardly have found

the strength to keep up the fight against so much opposition. Meanwhile, at least a part of his neural therapy, segmental therapy has become, as it were, socially acceptable. Since the ideas of neural therapy have begun to be more widely accepted and since electrophysiologists have been able to prove that the electrical potential before and after a procaine injection is changed by a measurable amount, criticism has become more objective. Ever more of those who were earlier to be numbered amongst the fence-sitters have been forced to admit that the Huneke phenomenon is also a fact. The movement of a pointer on a dial obviously has a greater power to convince the doubters than all the practical experience and the large numbers of all those whom this therapy has been able to cure.

F. Huneke lived just long enough to have the satisfaction of knowing that irrefutable proof of his lightning reaction had also been provided on a scientific basis (Bergsmann, Harrer, Kellner, Pischinger, Schoeler, Schwamm, Siegen, Stacher) and that this part of his method had now also become a practical proposition that could stand up to investigation and thus be acceptable to doctors.

A few attempts have been made by the opposition to prove this evidence untenable. Since these attempts were not carried out in accordance with Huneke's rules, it was to be expected that they would fail, as indeed they did. As a result, H. Schoeler, a friend of neural therapy, confronted one of its well-known opponents with the delightful phrase published in Prager's book *Erkennung von Krankheiten* (*Identification of Diseases*): "There is no such thing as playing the piano. I have tried it a number of times and have not succeeded in doing so."

Despite this, playing the piano is easy enough: you "merely" need to press the right key at the right time. We all know that playing the piano is not quite so simple. The key signatures and fingering can be learned. But in addition to the technical foundation, something else is also needed to bring playing the instrument to full artistic perfection: it must have its spiritual component if it is not to sound flat and dead. Intuition and inspiration make the difference between the artist and the artisan.

It is the same with the art of healing. Technique and basic rules can be learned by anyone up to a certain point. After all, it is merely a matter of injecting procaine in the right place. But we are not dealing with an instrument that always remains the same and that will produce the same sound whenever we press the same key. Every occasion is different because we are each time dealing with a different human being who is unique in his or her particular combination, in whom everything is in a continual state of flux and who is subject to constant change through every emotional stimulus and all such other stimuli as heat, cold, radiation, toxins, noise, injury etc. All these are continually forcing his/her regulating mechanism to adjust and find a state of equilibrium for the voltage differences that occur and to guide them back into safe channels. If I prick this particular person with a needle, I am creating not only an alarm signal that sets off the reactive pain, I am also producing a short circuit in the neurovegetative system, which is instantly registered by the entire tissue system of the almost unimaginable length of 12 times the Earth's circumference and to which an immediate response is produced. When I pull out the needle again, the person before me is, from an electrobiological viewpoint, a different being.

Seen in this light, it would not be difficult to become discouraged at the prospect of undertaking to write a book on neural therapy. If art can be learned only up to a certain point and if an artist needs to possess something extra called intuition, success would be to some extent dependent on things that cannot be taught. This is nothing new: one person can do something with ease, another can never learn to do it. And in this respect things are just the same as in learning to play an instrument: one has to make a start some time, even if it is the beginning that is the most difficult of all. Without the essential technical and theoretical foundation even the greatest natural talent can but rarely succeed. And who wants to see piano-playing limited only to the great artists of this world?

I know a number of my professional colleagues who have had a certain amount of success with simple injections to tonsils and scars, and with a primitive form of segmental therapy based on the precept of injecting wherever the patient feels pain. They are proud of this success and are able to produce results that they were unable to obtain before. But this is not enough to make them into neural therapists. One can help one's patients far more and more effectively, the better one masters this instrument in the armory and provided one is not too easily satisfied with oneself and one's own achievements. By his or her profession, every doctor is committed to continuing to perfect his or her skills. Whether he or she will ever reach the level of becoming an expert in the art of healing is then no longer so important. Our first commandment is: Thou shalt help, to the best of thy knowledge, ability, skill and conscience.

3 Psychotherapy, Neural Therapy, and Suggestion

It is the greatest mistake in the treatment of illness that there should be physicians for the body and healers for the soul, for these two cannot be separated.
Plato

We must require of any causal treatment that is to hold out any hope of success that it should take into account the influence of the neurovegetative system upon pathogenesis. There are two routes that give access to the neurovegetative system:

1. the organic component, by means of neural therapy in the widest sense (massage, counter-irritation methods, balneology, irradiation, chirotherapy, Kneipp's therapy, acupuncture etc., but particularly by selective procaine therapy);
2. the psychological component, by means of psychotherapy.

Seen in this light, neural therapy and psychotherapy are therapeutic twins; both act directly on the neurovegetative system and are able to influence it in the sense of restoring equilibrium. They are therefore complementary, although they can only occasionally be used in each other's stead, since each has its own sphere of influence and competence. Thus, it has been proved that procaine fails completely when it is used in purely psychogenic illness. This applies even to the extent that the failure of neural therapy strengthens the suspicion that we are dealing with a psychogenic process and that a cure in such a case can be achieved only by psychotherapy. This fact ought to be noted especially by those who reject our method out of hand without taking the trouble to seek unprejudiced and technically unimpeachable critical proof; these can often be found amongst those who can find no worse explanation for the surprising cures we are able to obtain than well-worn epithets like "suggestion" and "magic." One gathers the impression that behind such an attitude there is the intention to humiliate. Or Palmstroem's logic: "for that which cannot be must not be!" In this regard, Hippocrates was a great deal more tolerant when he stated that "the physician has but a single task: to cure; and if he succeeds, it matters not a whit by what means he has succeeded!"

When in 1951 Ratschow decided to test neural therapy in his clinic, he and his assistants were able to produce lightning reactions in 8% of the patients they treated. These tests also showed that enthusiastic doctors achieved far more successes than the cool skeptics whose approach to medicine was from a purely scientific and technical direction. It was inevitable that the opponents of the Huneke brothers should see this as proof of a purely suggestive effect. But it is quite simply the result of a more intimate rapport with the patient of which such doctors are capable. This closer relationship with the patient is one of the prerequisites for success. There is no other method in which the physician is more dependent on an equal collaboration between the patient and him or herself and where he or she must respond more individually to his or her patient than in the case of neural therapy as we understand the term. We thus take Ratschow's statement that our therapy promises better results if used by a doctor with a vocation to be anything but deprecatory, since it clearly shows us the direction in which we must go. Ratschow, too, saw it in this light, for he spoke of "the great significance of Huneke's observations" and fully accepted the lightning reaction. Theoretical considerations only led the forensic physician, D. Krause, to this realization: "Neural therapy is a suggestive method that is focused on symptoms and uses pharmacological anesthesia induction."

Our opponents' constantly repeated objection that the success of neural therapy is based purely on suggestion is as old as neural therapy itself. But it is not difficult to disprove this: there have also been objectively proven segmental cures and Huneke phenomena in veterinary medicine (Braemer, Kothbauer, Poser, Siegert et al.) in dogs, cats, horses, and cattle, in which any psychological influence can be absolutely excluded.

This must obviously hold true also for human patients: neural therapy used under anesthesia or hypnosis, of which the patient had no knowledge, was equally successful as if they had been conscious. I have cured patients by hypnosis where neural therapy has failed, and vice versa, and before I adopted neural therapy as my life I needed this experience to convince me that the two therapies work quite differently. If six treatments have failed to produce results and only the seventh, by the injection of a previously overlooked scar, has produced a lightning reaction, is it then possible to argue that the first six treatments were not suggestive

and only the seventh developed the requisite power of suggestion? If that were the case, then could the neural-therapeutic preparation do its work of suggestion only when injected at the correct site for the particular patient being treated?

The double-blind experiment is supposed to eliminate the possibility of suggestion. If a patient tells me (see Case History 30 in Part II), before the second treatment, that the injections did not affect the arthritis in her knee but the compulsive neurosis with thoughts of suicide, which she had omitted out of embarrassment, has disappeared, does that not fulfill the requirements for the double-blind experiment? Why do none of the intramuscular injections that are given daily all over the planet, using all sorts of substances, produce reactions that remove remote disturbances? Neural therapy is not suggestive therapy. On the contrary: in psychogenic illnesses, neural therapy fails so patently that these have had to be included in the list of contraindications.

No measures taken by any doctor can ever completely prevent a certain suggestive effect from being achieved. Ours are no exception to this. If I give an intravenous procaine injection and a few carefully sited intracutaneous quaddles to someone suffering from angina pectoris, and by this means relieve them of the pain that they had felt was overwhelming and destroying them, then by removing the pain I also take from them the fear of death. I break the vicious circle formed by fear, tension, pain, fear on account of the pain, and in this way, in addition to achieving an improved blood supply due to reflex action, I also produce muscular and psychological relaxation. And because I can achieve the same result on every occasion they have another attack I can also break down their expectant fear, which prepares the way psychologically for their next attack. By this means I also remove their sense of hopelessness that exacerbates any disorder. If this is suggestion, then I willingly make use of it! But my work cannot be dismissed as being nothing more than suggestion, on this account. Our conviction that our therapy acts effectively on the causal relationships is often pounced upon as proof of our use of suggestion. Belief in the correctness of one's own actions is often the best of helpers, no more, no less. The schools need to see everything neatly tagged, labeled, measured, and quantified, by what is called scientific proof. But is life quantifiable? And is the unquantifiable therefore unreal, non-existent?

For the general practitioner, for whom this book has been primarily written, the problem of merely collecting symptoms and constructing a scientific diagnosis from them simply does not exist. That is the kind of diagnosis that one can then look up in the currently accepted textbook, in order to find out what treatment is supposed to help, rather like taking a cookery book and reading the recipe: "Take a dozen eggs." To us, every sick person is a unique problem that has never occurred before and which we have to solve. And this sick person is a human being consisting of body, soul, and psyche!

The psyche is integrated in the interaction of closely interlinked control circuits, which mutually influence one another. The human psyche is a highly active cybernetic system, which is constantly learning more and developing further, and which automatically regulates itself within the framework of the total personality of the individual. Pavlov's conditioned and unconditioned reflexes also play their part in this. The psyche receives signals from other control circuits and sends out signals to them, which are capable of acting as control values or as interference values. In addition, in the adult, reason exerts a corrective control function and consciousness permits a "creative response." In this lies a fundamental difference compared with purely mechanical robots. "Psychic life is in a mysterious way a brain-nerve function experienced from within" (J. H. Schultz). The psyche is intimately linked with the neurovegetative system. One might say that the neurovegetative system is the instrument of the soul, the moderator between psyche and body, the organ of stimulus response and thus the "vital nerve." If we are concerned with the patient's autonomic and thus with their spiritual (psychic) equilibrium, we need also to try and eliminate the defective voltage in their spirit and to awaken in it the hope of being cured.

A well-balanced psyche is an excellent prophylactic against illness; the fear of illness often brings about that which it fears. We need to bear in mind that 30% of our patients are ill due to psychogenic causes or that the psyche is at least an important factor in their falling ill. What part it does play may not be determinant, but it is certainly co-determinant. The spoken and written word, to quote Pavlov, "is for man as much a conditioned stimulus as any other he has in common with other animals, but it is far more all-embracing than any other." It forms ideas in the subconscious by means of the processes of reasoning. If such ideas are intense enough and persist long enough, they turn into beliefs. Every idea tends to become self-fulfilling, and belief, faith, both in a positive and in a negative sense, "can move mountains!"

If a patient falls ill because of what they believe, only psychotherapy can help them with the healing counter-irritant stimulus, the word. This may be achieved by discussing their problems with a doctor in whom they believe, has faith, whom they trust, actively by autosuggestion under qualified medical supervision, for example, in the form of autogenic training, or passively by hypnosis. In such cases, the patient suffering from a psychogenic illness has the wrong "illness" image in their subconscious replaced by the right

"health" image, and their disturbed equilibrium is thus restored to normal. If the patient only thinks "perhaps," then in terms of being capable of being cured of a psychogenic disorder this means "no." If they "pull themselves together," they become tense, inhibited, precisely when they ought to be able to "let go" physically and mentally, to relax, unbend, un-tense, and when in the place of their conscious will they should set their belief that they will be cured. We need to set them on this road. Feeling can be influenced by thought. Someone who puts their illness in the center of the stage, who feels sorry for themselves or becomes resigned to fate will sink ever more deeply into the morass of negative sensations. But someone who is consciously confident and who thinks in positive terms will experience a sense of well-being as a result of the echoes sent back by the subconscious. Reason can help or harm by way of the neurovegetative system. We therefore also need to make use of its powers.

However, as a rule, we shall only very rarely have to deal with purely psychogenic forms. We are far more likely to encounter the typical mixture in which organic processes are coupled to an additional psychological stress. An organic illness can be due to psychological factors, and psychological disorders can be produced by organic causes. Any biological process can be amplified or attenuated by the psyche (Western terminology) or the cerebrum (Soviet terminology). It is not an easy task for the physician, but nonetheless an essential one, to discover to what extent the neurovegetative system is disturbed by the psyche and to what extent by the organic component. Treatment must be determined accordingly and needs to take each component into account according to its proper share. We need to have more courage to use the word! The word as medicine has in our day been largely replaced by the chemical preparation, just as the doctor's direct influence has been superseded by pharmaceutical advertisements and "enlightenment" of the public. We ought not to allow the wonder of healing to be left to the particular physician's charismatic effect on his or her patient or to the magic of what we write on our prescription pads. We should also be prepared to make an effort of our own, and for this the only right way is the way that leads to a cure.

In 1929, when surgery of the sympathetic chain was the latest fashion and hence was often practiced to excess, Erwin Liek said in connection with criticism that:

> in these methods, the effective element is the stimulus to the autonomic nervous system, which we may confidently call the stimulus to the psyche. But if I know that the word is all that I need to stimulate the sympathetic system (which regulates and controls the condition of the blood vessels and which probably also acts as the conductor of all pain sensations) to make a person blush or turn pale, to make the heart beat faster or more slowly, to influence metabolism, respiration, the activity of the digestive glands and the muscles of the digestive tract, then what is the purpose of the knife? Is it not more ethical for the physician to choose the simplest and safest method?

In saying this he was referring only to psychotherapy, to influencing the neurovegetative system by the use of words. At that time, he could not in this context take into account the other safe and simple method of influencing the sympathetic system at another level and by means of another far-reaching healing stimulus that is able to restore the regulating mechanisms to normality, neural therapy. But another medical man mentioned by him in the same work, the surgeon Leriche, later to a large extent abandoned the sanguineous surgery on the sympathetic chain in favor of procaine injections, which he came to describe as the "surgeon's bloodless knife."

4 The Successes of Neural Therapy and Statistics

A good physician needs no trumpet.
Proverb

At first sight, the range of acute and chronic illnesses for whose treatment neural therapy is indicated, using products containing procaine or lidocaine, appears surprisingly large. Why this should be the case becomes clearer when we look at the therapeutic possibilities generally available to us for influencing an illness:

1. Means acting directly on the diseased organ:
   a. Genuinely organ-specific means are very few in number.
   b. Unspecific methods acting on the affected organ are found more frequently, amongst which we number the segmental therapy that forms part of neural therapy according to Huneke.
2. Means that, in the sense of acting as regulating therapies according to F. Hoff, influence the regulating capacity of the organism as a whole:
   a. Means that promote regulatory functions and/or tissue reaction; in addition to counter-irritant therapy, the regulating therapy in the form of segmental treatment that we practice in neural therapy according to Huneke again belongs to this category.
   b. Means that inhibit regulation, and stimuli such as anti-phlogistic preparations, antihistamines, neurotropic drugs; segmental therapy according to Huneke also belongs to these, since it develops a regulation-stimulating or a stimulus-inhibiting effect depending on the autonomic state found initially.
3. Means that act on the interference field and/or bacterial focus:
   a. The Huneke phenomenon.
   b. Surgical excision.

As we have seen, however, success in neural therapy depends not so much on the medication used but on the correct location of the injection. Failure is thus not always attributable to the method as such. A detailed case history, thorough examination of the patient, anatomical knowledge, familiarity with the technique to be used, experience, flair, and intuitive feeling, are as essential for success as perseverance on the part of both doctor and patient. It might be wise not to mention the intuitive sense of the artist, but this also has a special part to play in the art of healing. Let us remember Ratschow, who found in his objective studies on strict scientific criteria that physicians motivated by a sense of vocation were able to achieve a greater number of lightning reactions than the cool technicians working by rote. We need to take this result not as a compliment but as an obligation. We need to tune in to the patient, with an active love for the suffering human being before us. This is how the essential contact can best be established. That unquantifiable something that is an integral part of success, which we cannot describe but merely circumscribe when we call it intuition or flair, a "feeling" for the "right" point, a sixth sense. An overtired or spiritually troubled doctor cannot expect to have the same success as one who is relaxed and composed. There is a factor here that cannot be quantified or proved by objective evidence but that is nevertheless very real. Max Planck once wrote that "even in the natural sciences one cannot succeed without a dash of metaphysics."

Pessimists, those without a sense of humor or with a pathological craving for recognition ought to be barred from practicing as doctors. They make more people sick than they can cure.

The question of the statistical frequency of the Huneke phenomenon is essentially one that has to do with the success of the individual neural therapist. In 1950, Ratschow recorded 7.2 % lightning cures. In 1954, D. Gross, a student of the Huneke brothers, saw in 1500 patients with chronic diseases a 13.4 % lightning reaction after the first treatment, 75 % of the patients reported a significant pain-reducing effect, and only 11.6 % showed no reaction. In 1976, the evaluation of a field trial with 105 patients who were treated by five different experienced neural therapists, showed in 46 % of the cases the existence of an interference field. The results obtained by the Huneke brothers and their successful disciples illustrate that at least 30 % (and probably more) of all chronic illnesses are due to interference fields. However, we should be quite clear on one thing: ever-increasing chemical pollution of our internal environment by means of regulation-blocking drugs is likely to reduce the number of Huneke phenomena experienced; it will certainly not increase them.

Large-scale statistics of results achieved by 25 neural therapists using our methods in treating 639 pa-

tients with → trigeminal neuralgia, which is so often resistant to treatment, produced the following. Out of the 639 patients, 34 % were cured, 37 % showed substantial improvement, 14 % improved and only 15 % showed no change. In 42 % of these patients (267), an interference field was found to be the sole cause or to be a complicating factor to such an extent that segmental therapy was able to lead to a substantial improvement only after the interference field had been neutralized. A complete cure could not be achieved particularly in those patients who had previously been treated unsuccessfully by destructive neurosurgery. This example alone shows that many cases of neuralgia were previously bound to remain incurable simply because the source of the interference that was causing them was not taken into account. The same is likely to be true for at least some of all the hitherto therapy-resistant cases of other illnesses. It is therefore worthwhile familiarizing oneself with so effective a method.

Reischauer used a statistical report to demonstrate that the efficient neural therapy is low-risk. In 1961, he reported 79 000 incident-free treatments with paravertebral nerve block anesthesia (using on average 30 mL of 1 % procaine) during the course of 8 years. They were divided into approximately 40 000 lumbar nerve root anesthesias, 13 000 lumbar sympathetic chain anesthesias as well as 22 000 stellate, and 4000 thoracic infiltrations. In Vienna, over a period of 20 years, Hopfer administered 2.5 million neural-therapeutic injections in an in-patient clinic for focal diseases. In addition to the above listed, he did a high number of joint injections. Only one problematic incident is known, in the case of a blood clotting disorder that had not been listed in the case history and needed surgical attention.

The pupils of the Huneke brothers who keep strictly to the therapeutic rules established by those whom they take as their models have had no reasons for regret. Their successful treatment of previously incurable conditions has become known quickly by word of mouth, and everywhere they have tended to acquire the reputation of miracle workers, to whom the seriously sick often make their pilgrimages from far away. We know that, as a result of this, there is a certain amount of preselection in the patients that come to us for treatment. Those cured or curable by the means available to orthodox medicine are to a large extent eliminated. And since we, too, are unable to help those who are sick due to psychogenic causes, practically only those left are those whose sufferings are due to interference fields or for whom skilled segmental therapy offers the best prospects of success. As a result, the number of lightning reactions observed by a well-known neural therapist in his or her day-to-day practice is doubtless greater than would be the case in the average general practice.

The gods demand the sweat of the brow as a prerequisite to success, in neural therapy as in everything else. Only someone who is fully familiar with the entire armory in both theory and practice and who is able to use it can be said to practice neural therapy. He or she must be able to pull out all the stops and must genuinely exhaust every possibility in the segment and track down every possible interference field before giving up. The physician should consider every "therapy-resistant" case a professional challenge. He or she should be forced to concentrate on the case even more and consider every possibility. The disease has many potential causes. We have to apply all our knowledge and experience together with a little bit of imagination. "Only that cause is lost that was given up!" (Marie von Ebner-Eschenbach).

I once treated a fellow physician suffering from angina pectoris. For days I turned him upside down and inside out. After all my efforts had remained of no avail, I recommended him to take up autogenic training, since I suspected that his condition might be due to a psychological disturbance. He went to see Ferdinand Huneke. Huneke listened to his report on my efforts, examined his teeth, noted a displaced wisdom tooth and with that intuitive certainty that never failed to surprise produced a lightning reaction. In my statistics, this patient would figure as a failure, in Huneke's book he would appear on the positive side of the ledger. Our awareness of our own inadequacies ought to be enough to prevent us casting stones at those who are less successful.

From this it will be seen that there cannot be any satisfactory statistics on successful cures obtained by the use of neural therapy, by which the effectiveness of the method could be proved. Apart from the well-known doubts as to the value of any statistics of successes, in our case they cannot tell us anything about the method itself but only about the conscientiousness, experience, and degree of skill of the individual practitioner of this branch of the healing arts. We know that similar symptoms leading to a diagnosis can be due to totally different interference fields or foci. And identical interference fields can similarly produce totally different symptom complexes. How can this be recorded in statistical terms? In the case of functional disturbances we may alter the subjective state but obviously not the pre-existing negative findings. In the case of visible changes, as in arthrosis deformans, neural therapy can relieve or eliminate the painfulness of the condition and prevent it from progressing further, but without producing any visible change in the radiographic findings. Every single case is always a unique problem for us to solve. No two human beings are the same, thus there are no two identical illnesses. To every illness, a suffering human being is attached, tortured in body and mind. Our task is to solve their unique problem, a

problem that affects their entire organism; we have to relieve and release them. Every cure is a victory, every failure is a defeat that should sadden us.

The techniques of neural therapy can be learned without insuperable difficulties by anyone. Every beginning is difficult. Anyone who does not want to remain simply as a helpless signpost to the nearest specialist when faced with a difficult case that has hitherto stubbornly resisted conventional treatment must enter this new territory with its broad spectrum of diagnostic and therapeutic possibilities. There will doubtless be some initial setbacks, which, time and again, may tempt specialists to give up, but their first successes will very soon lead them further and further out of their earlier therapeutic resignation and despair. A more optimistic urge will take its place and they will quickly enough discover that they are now able to achieve cures in all the specialist sectors where previously they were at the outer limits of their art.

5 The Failures of Neural Therapy

A proper physician learns something new every day and every hour, and he makes the most progress as a result of his failures.
Klussmann

1. By definition, neural-therapeutic means can influence disturbances only if these are due to autonomic causes or if a neural or humoral factor is at least one of the original contributory causes. Any illness can be blocked neurally in the segment or be due to an interference field, but it does not have to be!
2. Neural therapy is not indicated (except as stated) for:
   a. Mental disorders.
   b. Psychogenic disorders, including true neuroses and neurasthenia.
   c. Genuine deficiency diseases, e. g., a lack of vitamins, trace elements, or other bodily building blocks, hormone deficiency due to the inadequacy or absence of endocrine glands or their secretions.
   d. Hereditary disease, such as hereditary blindness or deafness; results of irreversible hereditary organ dysfunctions; in true epilepsy we can sometimes reduce the severity and frequency of the attacks, whilst the results in treating traumatic epilepsy are good.
   e. Advanced infectious disease, e. g., terminal tuberculosis.
   f. Cancer. Neural therapy alone cannot cure cancer! But we can exert a positive influence on the pain and the inflammatory conditions that are always also present. According to the latest findings, cancer is to a large extent a problem of molecular-biological energy. It is thus reasonable to include neural therapy with procaine as a basic therapy in treating any patient for cancer. See also Part II under → cancer.
   g. Completed cicatrization with mature scar formation, e. g., renal atrophy or advanced cirrhosis of the liver. In other cases (e. g., arthrosis deformans) we are able, despite extensive destruction and far-reaching degenerative changes, to help the organism to heal the defect to a point where the symptoms disappear partially or completely.
   h. Biological influences that produce a pathogenic reaction from the individual patient (for example, climatic influences and geopathic disturbances). By removing the interference fields, we are frequently able to raise the stimulus tolerance level to a point where the influence is subtle.
   i. Zoonoses and diseases caused by parasites (e. g., toxoplasmosis, amoeba, trichomonads, lamblia, tenia, and their larvae).
   j. All acute surgical indications.
3. The method itself is not to be blamed for every failure. If we merely take into account the difficulty of finding every possible interference field from the history and examination of the patient, this in itself will show how easy it is to overlook one of them. But only that is lost which is abandoned! Often enough perseverance by both patient and physician is rewarded even after several attempts have proved to be in vain.
4. Speransky's experiments show that illnesses can become autonomous. The time they take to reach this stage will vary from patient to patient and from illness to illness. In this way, what may have begun as a tonsillogenic polyarthritis may become independent of its point of origin and follow its own laws. From this point onward tonsillectomy will fail just as much as our injection to the tonsillar poles. Earlier, treatment at the point of origin would still have helped, but once autonomy has become established it is too late.
   There is nothing that can tell us when a disorder has become autonomous. Neither the patient's age nor the duration or severity of the disorder, or his or her physical condition provide any kind of pointer. We need to ask the body itself, by means of test injections, whether its regulating mechanisms are for the time being capable of reacting in any way to our injections. Thus, for example, it is never possible to tell simply by looking at it whether a severe, advanced case of polyarthritis with contractures and ankyloses will respond to our treatment or not. For this reason, an attempt at treatment, using all the means available to us, is appropriate in every case. Even if we are no longer able to produce a Huneke phenomenon, segmental therapy often enough still offers us a sufficient number of therapeutic possibilities.

If the body's reactive condition is unfavorable, and particularly where we are confronted with a "regulatory paralysis" (e. g., after cortisone or phenylbutazone), it may be proper and necessary first to stop all regulation-inhibiting medication. Surgical removal of the interference field may have to be considered, when testing by procaine does not produce any adequate reaction or if there is no reaction at all (teeth!), e. g., in the case of chronic appendicitis or with scars that, when tested, do not produce a complete Huneke phenomenon. Above all, it is always desirable to have the teeth thoroughly treated and any possible dental interference field removed, since we know that testing of the teeth fails in 30–50 % of all cases.

Following this we need to try to release the regulating mechanism with a more far-reaching reversal from its deadlocked situation. A series of autotransfusions or Elpimed, Ponndorf's or cutivaccine vaccinations, Kneipp's cure or fasting, or other biological activation and cleansing treatments via the skin, digestive tract, or kidneys, even venesection; any of these alone or in combination may produce such a reversal. After stopping regulation-inhibiting drugs and breaking through the regulatory paralysis, the organism will as a rule respond with a massive regulatory reaction. The patient must be warned beforehand that such a "worsening" is what we are looking for and that he or she must overcome this with our help; if we fail to warn them in this way they will lose confidence and stay away. This phase shows us that the reaction-blocked chronic disorder is now returning to an acute state that will respond more readily to our therapy. A renewed attack on the illness by means of the regulating therapy given to us by Huneke can only now hope to lead to success.

5. Surgery of the sympathetic chain leaves behind an irreversible condition, which can greatly reduce or completely inhibit the prospects of successful neural-therapeutic treatment. Ricker took the view that severance of the nerves not only cuts out a part of the reflex channels, but that, in addition, it also creates a continually disturbing stimulus. Speransky pointed out that sympathetic-chain surgery belongs to the type of damage that regularly acts as trigger factor and that then causes the previously resistant organism to react in a neurodystrophic manner. Leriche, the great master of sympathetic-chain surgery, recognized the superiority of procaine injections compared with surgery and recommended procaine therapy as the "surgeon's bloodless knife." It is a matter of daily regret to us that this fact has not yet become common knowledge amongst all who practice surgery and gynecology!
6. Pension neurotics are hopeless subjects for treatment. Once the desire to draw a pension dominates the patient's mind, a cure is no longer part of the program and is largely unwanted. To a lesser degree this is also true of the employee whose preoccupation is only to obtain his or her doctor's certificate to enable them to stay off work. Morphine addicts and others who have become dependent on narcotics are likewise poor subjects for us, even if they appear to be reasonable and repeatedly assure us that they would gladly give up their drug if only someone were able to relieve them of their pain. Their subconscious desire for the drug may be much stronger than their apparent wish to be cured. So, they are able to prove to themselves and others that neural therapy, too, has failed them and that they must therefore go on taking their drug. As for us, we are all the more pleased by every one of these that we are able to free from his or her dependence on powerful drugs.

   Where all attempts with neural therapy have failed, masked depression should also be considered as a possible cause. But none of these thoughts should be in our minds when we start treating a patient, only at the end, and they should never tempt us to give up too soon.
7. In our view, radiographic therapy in the treatment of joint and skin disorders is a thrust into the electrical structure of the organism capable of producing the desired result in segment-related disorders only, but which is doomed to fail in any caused by interference fields. On the other hand, any local radiographic treatment has a blocking effect on the functions of interstitial connective tissue and hence also on cell metabolism. Such profound damage to the neurovegetative system can for a long time, and sometimes permanently, prevent any possibility of successful treatment by neural therapy. In addition, zones damaged by radiation can obviously also turn into interference fields and cause new secondary symptoms. For this reason we demand that the harmless procaine therapy should always precede any intended radiation therapy.
8. We also dislike finding any lengthy cortisone or prednisone treatment in our patient's clinical history. Glucocorticoids destroy thymocytes and lymphocytes at the points where these are produced. They are thus no longer able to carry out their functions. The whole process of unspecific defense against infection stops halfway. Corticosteroids and pyrazolones do, of course, cause the painful, inflammatory stage to devolve rapidly into a less painful phase of apparently reduced symptoms. All too often, however, the acute disease process turns into a chronically progressive one, which smolders on, putting a continual strain on the environmental system and leading to a therapy-resistant state of debility that may continue for years.

Any outside supply of hormones given for lengthy periods reduces the body's own production. In the case of cortisone, in addition to a number of not inconsiderable side-effects, there is always the danger of adrenal insufficiency or atrophy, which can substantially worsen the prospects of restoring the internal equilibrium by the use of procaine. Cortisone induces a stage of autonomic shock. The organism responds to this as a defensive reaction by inhibiting a number of vital functions. In this state, the body tends to become refractory not only to additional negative but also to positive influences. The latter include neural therapy, which normally has the effect of activating the biological response. This inhibition seems to be overcome only when the adaptation stage is reached. The return to normal reactions can be seen in the recovery achieved in the mineral metabolism and can be demonstrated by iodometry (Pischinger).

As a rule, weeks or even months need to be allowed to pass before the neurovegetative system is again able to respond to our therapy. In such situations, we will progressively reduce the doses of cortisone and try to stimulate the adrenal glands with Synacthen Depot to start the body's own cortisone production again, as far as this may still be possible. In addition, Elpimed injections may help to overcome the cortisone damage more quickly. However, the capacity of the Huneke phenomenon to restore order often succeeds, before this point is reached, in breaking through the cortisone block with all its negative and inhibitory effects.

Other drugs acting to block the regulating functions as we know them are phenylbutazone and the psychopharmaceutic drugs such as amphetamines, anti-depressants, tranquilizers, neuroleptics, sedatives, and hypnotics, all of which are today being swallowed by so many people without a thought as to their side-effects and consequences. Chemotherapeutic preparations, antibiotics, immunosuppressants, and cytostatic drugs also form part of this group. The same also applies to all pharmaceutical products and to any measures that permanently damage the autonomic nervous system and thus make it less responsive.

9. Neural therapy cannot reverse any major pathomorphological changes. But the functional disturbances they produce, which do not normally respond to treatment, are therapeutically accessible to us. Neural therapy has its limits. It cannot therefore make the diagnostic and therapeutic means of orthodox medicine superfluous. It can only ever complement these.

Practical Applications

1 Segmental Therapy

The Lord may forgive us our sins,
the nervous system never does.
Indian proverb

a) Basic Principles

The segmental nature of the spinal cord and the spinal nerves is due to the fact that the only way for the nerves to leave the vertebral canal is through the segmentally organized intervertebral foramina. The spinal cord is relatively short, ending at the level of the second lumbar vertebra. Consequently, only the upper segmental nerves have a short oblique path from the spinal cord to their vertebral foramen; with increasing distance from the head, the nerve roots descend in the vertebral canal in a more and more oblique direction, and finally (in the lumbosacral area) craniocaudally (see Fig. 1.**19**). We distinguish a total of 31 segments, according to the position where they leave the spine:

- eight cervical or neck segments, corresponding with the dermatomes CI through C8;
- 12 thoracic (dorsal) or chest segments T1 through T12 (D1 through D12);
- five lumbar or loin segments L1 through L5;
- five sacral segments S1 through S5;
- and one coccygeal or sit bone segment.

Every segmental nerve is divided into several branches after leaving the intervertebral foramen. For now, the focus should be placed on one anterior branch that supplies the ventral and lateral area of the body and on one dorsal branch. The anterior branches of the segmental nerves C1 to T1 and inferior to T12 form various plexi that create larger and smaller peripheral nerves, which mainly supply the extremities. Every branch contains fibers from several segments, but only a part of the segmental fibers. In addition to the spinal nerves, there are 12 pairs of cerebral nerves.

The nerves discussed above are part of the conscious, deliberate cerebrospinal system if they consist of fibers with ganglion cell bodies in the spinal chord or in the brain, in the spinal ganglion of an intervertebral foramen, or in a root ganglion homologous to these ganglia.

Ganglion cells and their processes that are located more peripherally are part of the vegetative nervous system. The efferent branch of the vegetative nervous system is involuntary or autonomic. In this autonomic system we distinguish between the sympathetic system and the parasympathetic nerves:

1. *Sympathetic system:* The two sympathetic trunks form its unit. The sympathetic trunks run partly anterior and partly lateral to the spinal vertebrae. At the caudal end, they meet anterior to the coccyx. Every sympathetic trunk consists of 22–25 ganglia and their internodal fibers. The number of the ganglia of the sympathetic trunk differs only slightly from the number of the segmental nerves. The cervical area is an exception with only three ganglia. The ganglia are connected to the segmental nerves of the same level. Fibers that branch off the segmental nerves via this communicating branch can descend or ascend in the sympathetic trunk and spread to various ganglia (up to nine). Three different paths lead from the sympathetic trunk to the periphery:
   a. the splanchnic nerves;
   b. plexi in the adventitia of the arteries; and
   c. the network of the segmental nerves and their branches.
2. *Parasympathetic nerves:* Parasympathetic fibers exist, in addition to other fibers, in the brain nerves III, VII, IX, X, and in the segmental nerves of the sacrum. In this context, the vagus nerve is of greatest influence. For this reason, the term "parasympathetic" is frequently replaced by the term "vagal." While the sympathetic system influences the entire body, including the skeletal muscles and skin, only visceral and vascular structures are known and cutaneous structures are assumed to be influenced by the parasympathetic fibers.

The distinction between cerebrospinal and vegetative nervous system is only partially valid. The vegetative system has its highest control centers in the brain. These centers are connected to the centers of the cerebrospinal system. This is why consciousness is able to influence the autonomic actions of the vegetative nervous system at any time. The categorical division of the two systems is unwarranted and contradicts our concept of the nervous system as a cybernetic system that enables and regulates the activities of the organism as a whole.

Nonnenbruch, in his book dealing with bilateral kidney disease, wrote in 1949 that:

> the autonomic nervous system is a single entity, a great syncytium, which is massed together into conglomerates in the central nervous system and ganglia and then divides in the periphery into the terminal neuroreticulum which enters into intimate plasmatic contact with the cells of the whole of the blood stream and reacting organs (Sunder-Plassmann). The hormonal system is anatomically and functionally closely linked to it. The terminal neuroreticulum is an autonomic terminal formation which accommodates the afferent, efferent, secretory and, as we may say today, trophic elements in a common plasmatic conduit. Histologically they cannot be separated. This harmonium can produce a variety of sounds and harmonies. On predetermined and on individually formed pathways a stimulus can spread to produce demonstrable single and collective reactions of the most varied kinds either within the same segment or in adjacent or more remote regions. Similar stimuli can produce very different reactions, different stimuli can equally well produce a similar response in this process. The diencephalon is the central relay station for these autonomic processes. It receives its stimuli via the blood, from substances formed within itself, and from nervous impulses it receives from every point of the nervous system. The channels used and the rhythm of these impulses are characteristic for the course these reactions take. The terminal neuroreticulum is like a peripheral brain. It records the most varied, wide-ranging impressions and, from an inner rhythm or in response to specific and unspecific stimuli, it is able time and again to produce preprogrammed specific and unspecific reactions.

Six years later, Pischinger demonstrated that the "autonomic basic system" instead of the terminal neuroreticulum acts as the peripheral brain and controls the vegetative processes as well as the central centers do.

3. *The membranous system:* In addition to the electrical transmission provided by the neurites of the autonomic and central nervous systems, there is also a biocybernetic control system in the periphery. This consists on the one hand of Pischinger's cell-environment system and, on the other, of the membranous system, which has been described as the "stimulus-transmission system of the electrically charged cell-membrane surfaces." Loewenstein and Kanno proved experimentally that, contrary to what had previously been assumed, cells are not isolated and electrostatically insulated from one another by their cell membranes. The electrical current applied to various types of tissue cells was found to be transmitted practically unchanged to neighboring cells. The German Professors E. Neher and B. Sakmann received the Nobel Prize in medicine in 1991 because they were able to make the ion channels used for information exchange between the cells visible and the ion flow involved measurable. Pischinger and Stockinger were able to prove on the odontic nerve (dental pulp) that stimuli are also transmitted via the membranous system in the case of connective tissue. With the discovery of the stimulus-transmission system, proof has apparently been provided that every single cell in the living body is indirectly in constant touch with every other healthy cell. Thus, every cell is constantly aware of what is happening in every other cell throughout the organism. Only depolarized cells, i.e., cells that in this context must be regarded as sick, are excluded from this total information system. They form a gap in the intercellular communications network. Our task is to close this gap by repolarizing them, and this can be achieved by means of procaine.

When we refer to the neurovegetative system, we mean by this not so much an anatomical entity as a functional concept that comprises the whole of the neurohumoral regulating system working under the control of conditioned reflexes, i.e., that which comprises not only central but also peripheral regulation. Following Pischinger, we describe this as the "basic autonomic system." One might also say that "Mother Nature," by neurovegetative balancing potentials, is constantly reducing endogenous and exogenous noxious substances and rendering them harmless. Our therapy with repolarizing local anesthetics is able to help these biocybernetic energy processes by supplying chemical energy where it is needed when the organism cannot build it up again from its own resources.

Scheidt found that at C8, L2, and S2, the so-called transition segments, there is a massive and particularly close link between the two sympathetic chains, the cerebrospinal nervous system and the autonomic channels to and from the internal organs. The intimate contact and bunching together of spinal and autonomic nerve elements in these areas suggests that these are particularly important relay stations. We know that wet, cold feet all too often produce sore throats or urinary-tract disturbances. All segmental nerves and the corresponding autonomic ganglia—subject always to overriding control by the central relay stations—supply a closely circumscribed, compact zone, which comprises skin and subcutaneous tissue, connective tissue, the vessels, muscles, bones, and internal organs.

Segmental diagnosis and therapy are based on recognition of the fact that all these parts of a segment supplied by the same nerves will respond by reflex as a single entity to any process within the segment. Unphysiological stimuli that the regulating mechanisms are no longer able to balance out and intercept will disturb the segmental functions to such an extent that illness ensues. However, interference impulses do not always remain isolated and localized to a single organ or

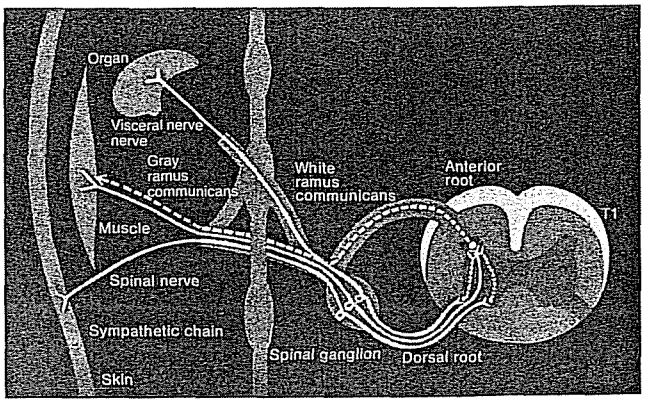


Fig. 1.12 **Muscular reflexes (according to Hansen and von Staa).** As shown, the anterior-horn cell can receive a stimulus in a number of ways: via afferent channels involving the spinal ganglion, dorsal root, and synaptic cells of the segment that contains the organ; or via efferent channels involving the motor anterior-horn cell and muscles.

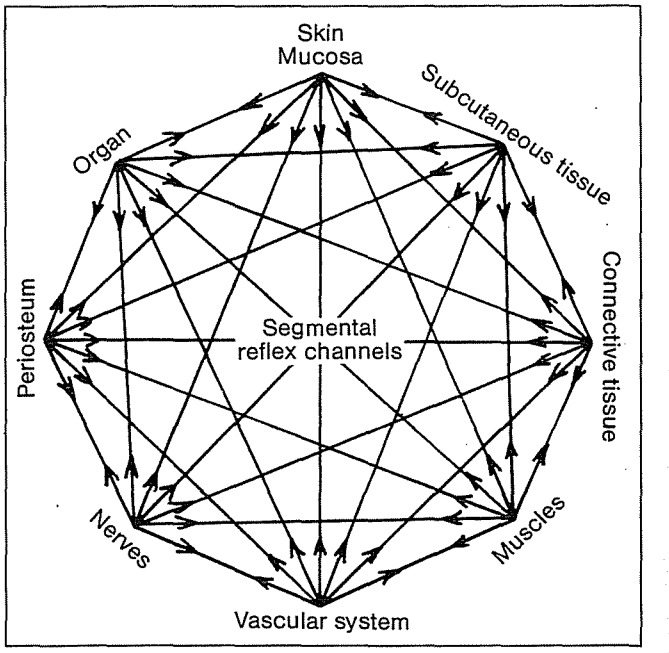


Fig. 1.13 **Segmental reflex channels.** Skin: head (cutaneovisceral reflex channels: Ponndorf's, cantharides, Kneipp's, acupuncture, quaddle therapy, etc.); subcutaneous tissue: Leube/Dicke (massage); connective tissue: Preusser, Koetschau (fibrositic nodules) Pischinger (basic autonomic system); muscles: Mackenzie (muscle spasm, massage, injections); vascular system, blood supply: Ricker, Schwamm (relative pathology, infra-red therapy); nerves, ganglia: Speransky, Huneke (neural pathology, neural therapy); periosteum: Vogler, Krauss (osteovisceral reflex channel); organ to organ: viscerovisceral reflex channels. All tissue is interlinked with all other tissue in mutual relationships. Neural therapy acts upon all the components when procaine is injected at the correct site.

organ system. Instead, they may be transmitted further via the nerve channels. First, they are sent as messages from the periphery to the central relay station, which then sends back its orders by the same route. But the streams of impulses also pass from the periphery via the spinal cord to the organ belonging to the segment and vice versa (cutaneovisceral reflex) or from the organ via the spinal cord to other organs (viscerovisceral reflex). The whole of the endocrine system is integrated into these autonomic interrelationships. The entire neurohumoral functional structure is so intimately interlinked that a disturbance in any part of it immediately causes the whole of the functional unit to become altered and to react. Thus, it is never an organ that becomes ill, but always the whole human being! Every irritation, every stimulus strikes the whole, and the whole organism responds.

Head and Mackenzie observed that when an internal organ became diseased, changes always occurred in certain skin and subcutaneous segments. They concluded from this that there must be an effective mutual neural relationship between the internal organs and their corresponding areas on the surface of the body.

The hypersensitive and hyperalgetic zones found by Head are formed in the skin; circulatory disturbances and localized hyperhidrosis may also occur there. These skin zones are known as dermatomes. In response to stimuli, connective tissue will present superficial voltage changes, retraction or recession, dimpling, swelling and pilo-erection.

Mackenzie found hyperalgetic zones in the musculature, with muscular hypertonia and hypertrophy palpable as deep muscle spasm, which, where it persists, may change to hypotonia and even atrophy of the muscles.

Changes in the periosteum and bones can produce hyperalgesia and inflammatory swellings of the periosteum and may even lead to bony hypertrophy or atrophy, in advanced cases resulting in postural and motor anomalies.

According to Dittmar, the whole "neuro-angio-myo-sclero-dermatome" within a segmental entity responds to any stimulus (see Fig. 1.**12**) received by the segment.

Very ancient traditions in empirical medicine tell us that it is possible to make use of the reflex channels (see Fig. 1.**13**) from the surface of the body to sick internal organs and to produce a healing stimulus that will act on these organs. Chinese acupuncture, 5000 years old, treads this path together with counter-irritation therapies of all kinds, with their blistering plasters, moxa, leeches, cupping glasses, massages, and various forms of irradiation and applications of heat and cold. Modern neural therapy, which uses selective injections in the affected segment, also belongs amongst these. Incidentally, we owe the term "segmental therapy" to Kibler who was encouraged by the work of the Huneke brothers to treat all hyperalgetic segmental reactions with procaine (Novocaine) or Segmentan (1.29% sodium bicarbonate solution).

Convincing objective proof of the reflex relationships from organ to skin and vice versa is provided by

animal experiments. It is similarly possible to provide objective proof by the same means that procaine injections can favorably influence this mutual cause–effect relationship. The Austrian veterinary surgeon, Kothbauer, considered that if it was possible for a diseased organ to produce hyperalgetic points via cutaneovisceral channels on the skin in the segment concerned, then it should also be possible to reproduce this hyperalgesia by artificial irritation of the same organ. He therefore introduced small quantities of various highly irritant solutions into the uterus or ovaries of healthy cows without hyperalgetic points. A few seconds later, the corresponding skin points became hyperemic and reacted with severe pain to slight electric stimuli, which had previously remained subliminal. This demonstrates that the electrical resistance of the skin at these points was substantially reduced by the irritation in the internal organ. When left untreated, the hyperalgesia produced in this way persisted from several days to 3 weeks, precisely the same length of time as the consequences of chemical irritation to uterus or ovaries persisted. But when procaine was injected into these hyperalgetic points, the peripheral skin condition and the artificially induced inflammation in the organ were cured immediately. This reproducible experiment is a significant contribution to the objective proof of neural therapy and should not be ignored by our critics who only allow suggestion as an explanation for the results of our therapy.

Let us now look at this again in the context of an example from day-to-day practice. We know that the organic pain due to an inflammation of the gallbladder produces neural disturbances via reflex channels in the corresponding Head's and Mackenzie's zones. These present as skin and muscular pain and spasms, and as circulatory disturbances that affect the patient's metabolism. In turn, the secondary peripheral pain that they cause produces a negative feedback effect on the organic processes deep within the organism. The vicious circle of interference impulses produced in this way continually increases by reflex action. This can be blocked by an anesthetic in the areas showing changes in the skin, the subcutaneous tissue, muscles, periosteum, the afferent nerves, or the corresponding portion of the sympathetic chain. However, the anesthetic acts not merely as a "nerve block"; it is an additional stimulus, capable of normalizing the disturbed regulating system by setting off a "seesaw reaction."

The cutaneovisceral reflex channel also provides us with a quick, safe, and convenient means of differentiating between an inflammatory "acute abdomen" and colic pain. According to Dick, using distilled water, one to three strictly intradermal blebs (quaddles) are placed in the zone that the patient indicates as the most painful. In the case of biliary colic, this will normally be in the right hypochondrium; in renal colic it will be in the flanks and lower abdomen. The spasmodic colic pains disappear as soon as the painful distilled-water quaddles have been set, whilst any inflammatory processes in the abdominal cavity requiring specific treatment will remain unaffected. These measures do not interfere with any further diagnostic processes, whilst the use of opiates and other analgesics acting on the central nervous system is strictly contraindicated because of their masking effect.

In gallbladder disease, we inject a local anesthetic intracutaneously into the epigastrium, over the gallbladder and the areas of referred pain above the right shoulder and medially adjacent to the right shoulder blade, and into any scars in these areas. Excellent results have been obtained in all upper abdominal disorders by the additional injection of about a milliliter of procaine preperitoneally into the epigastrium, about three finger's breadths below the xiphoid process. In these cases we also inject a small quantity of procaine into the nerve-exit point of the right supraorbital nerve if this is found to be pressure-sensitive. Ratschow has confirmed that this point is hyperalgetic in about a third of all cases of cholecystitis and that in these all pain can almost always be stopped by a procaine injection to the nerve-exit point below the right eyebrow. If in palpating the body surface we find any additional deeper-lying hyperalgetic points and tonus changes in the connective tissues, as, for example, in the paraspinal muscles, we place a skin quaddle over each such point and then insert the needle through it to the correct depth, which the patient indicates when he or she feels pain (the "ouch point"). Here we then infiltrate a small amount of procaine. If the vertebrae themselves are tender to pressure or percussion, the preparation is injected to the vertebral periosteum, after making sure by prior aspiration that there is no sign of blood or liquor.

The most elegant treatment for colics is paravertebral anesthesia of the nerves on the right of T9 through T11. In segmental disorders of the liver, stomach, and gallbladder complex we have often found the injection of about 2 mL procaine to the right upper abdominal sympathetic chain or, more specifically, to the right upper renal pole (according to Vishnevski) to be particularly helpful. This treatment will generally also cause the chronic constipation that usually accompanies these disturbances to disappear, unless it is psychogenic or due to an interference field, repeating the injection a number of times if necessary. In such chronic cases we also like to add an intravenous injection of procaine, which has proved to have a positive reversant effect.

The choice, combination, and sequence of the means used in such cases from the extensive neural-therapeutic armory available will depend on the specific case, the patient's case history and the results of the exami-

nation that the physician will first have carried out. As he or she becomes more experienced, they will often find it useful to use several of these means in combination. This is a form of polypragmatism in the nonderogatory sense of the term, and a way of approaching the objective from several directions at the same time. This objective is to achieve a complete reversal within the neurovegetative system as quickly as possible in order to counter the pathological reversal that has occurred. We shall return to this point later.

In our example, hot fomentations, shortwave radiation treatment, and other local measures at the site where the disorder manifests itself, including surgery, may also, of course, provide relief. But most medical and surgical methods take longer and are often a good deal riskier than neural therapy with procaine or lidocaine, which acts quickly and is without risk to the patient.

b) Examining the Patient

> *The gods have put diagnosis before therapy... but diagnosis remains an empty word if it does not take us any further in therapeutic terms.*
> Volhard

Many a physician, when he or she comes into active contact with neural therapy for the first time, is particularly irritated and even shocked by the different attitude of neural therapists to diagnosis in the traditional sense. We are no longer satisfied simply to check off a list of symptoms, force them into their terminological straitjacket, and then honor this with the status of a diagnosis, nor, when we have produced a diagnosis, to regard our work as done, as we should be condemned to do all too often if that were our approach. To be honest, one has to admit that scientific medicine has not succeeded in more than relatively few instances in discovering the true pathogenesis of any disease and accurately defining it or in putting into our hands the safe and effective means to fight it as, for example, it has been able to do for diabetes with insulin, pernicious anemia with vitamin B12 and with hormones, chemotherapeutic preparations, and antibiotics. When we render homage to the great achievements of medicine, of which we have every reason to be proud, we must not forget the vast extent of the area we are still in the dark about. If we can manage to keep this in mind, our attitude will show a more becoming modesty.

We know three types of diagnosis: the genuine or accurate, the ungenuine or inaccurate, and the false. Of the genuine diagnosis we expect what Paracelsus demanded of it and what the word itself promises: seeing through the illness to its cause and recognizing its origins, since we can achieve a cure only by eliminating cause and origin. In this sense, for example, the Huneke phenomenon provides a genuine diagnosis.

A diagnosis in the accepted sense can often serve only as an aid to orientation, because it is generally inaccurate. In a good half of the cases it is satisfied merely to group symptom complexes into a descriptive terminology that can help us no further. What we need to know, in fact, is where the illness comes from, not merely what name we should give to it. Of the false diagnosis it is said that only the pathologist is able to clear it up.

Let us now take a fistful of diagnoses that apparently present as totally different clinical pictures and that we should assign to different specialist disciplines in medicine: humeroscapular periarthritis, angiospastic retinitis, Ménière disease, herpes zoster, epicondylitis, defective hearing, trigeminal neuralgia, stenocardia, posttraumatic osteoporosis, cervical syndrome, brachialgia paresthetica nocturna and Dupuytren's contracture. All these symptoms have to date existed separately, each being regarded as a diagnosis in its own right. However, we now know that all these disorders can be due to changes in the cervical spine and irritation of the cervical sympathetic chain. Logic suggests that the way to cure them all is identical, by removing their common cause by neural therapy or chirotherapy, i.e., by treating the sympathetic chain and the vertebral column in combination. To allow such so-called diagnoses to continue to exist separately would be almost tantamount to declaring them out of bounds to causal therapy.

This is not altered by the fact that all the disorders in our list can also be due to other mechanisms. Ultimately, in our view, the road to any illness leads via the neurovegetative system. We are perfectly well aware that many other factors may irritate the sympathetic system, either in addition or alone. Any disturbance in the cervical region can produce a large number of different symptoms that need not necessarily be due to local causes. For example, it may be caused via the nervous system by an insignificant appendectomy scar. This can be proved by means of a therapeutic diagnostic injection of procaine into the scar, which results in a Huneke phenomenon (lightning reaction). In that event, the genuine diagnosis will be "cervical syndrome (or trigeminal neuralgia or whatever) due to an interference field caused by an appendectomy scar."

Our attitude to some current "diagnoses" has been used as a pretext for accusing us of often using neural therapy uncritically and without adequate prior clinical clarification. Thus, the intention seems to be to use stricter criteria with regard to neural therapy than those applied to drug and other forms of therapy usual in medical practice. In general practice it is not always possible or economic to exploit all the diagnostic possibilities to the full. Most of the chronic patients who come to us have already passed through the mill of the

standard clinical diagnoses and therapies without being helped by them. Nevertheless, let me stress at this point that an accurate diagnosis in the conventional sense before treating a patient by neural therapy must not on any account be relegated to the background. Obviously, we too must test the patient's reflexes, examine their blood picture, check their blood pressure, test their urine etc., in order to obtain as comprehensive a picture as possible of their overall actual state. Obviously, we too must sort out beforehand any patients for whom our therapy is obviously unsuitable, and ought not, if at all possible, to overlook any case of carcinoma, syphilis, tuberculosis, diabetes, pernicious anemia, or the like. Whenever our examination indicates that new laboratory or equipment-based investigations may be necessary, we shall obviously arrange for these, in order to provide further clarification. Since nowadays no physician can be expected to have a complete grasp of the whole vast field of medicine, we have to rely on a good working relationship with a variety of specialists. In return for the fact that they will often view our activities with skepticism rather than wholehearted goodwill, we reserve the right on occasion not to regard their results and suggestions for therapy as immutable law.

We also consider it wrong to leap in uncritically with syringe in hand whenever a headache sails into view and overlook a brain tumor in the process! But we regard it as equally wrong and difficult to reconcile with the physician's first duty to his or her patient simply to go on prescribing tablets for someone suffering from chronic headaches or to subject him or her immediately and as part of the routine to a lumbar puncture, to fill his or her ventricles with air and set up a series of EEGs, instead of first trying the simple injections of procaine intravenously and under the scalp, which can so often bring relief. As evidence that one must never allow success to go to one's head and to affect one's judgment or sense of responsibility, let me quote the following patient history.

Case History 1: Farmer's Daughter, Aged 10

A farmer came to me with his 10-year-old daughter, who for a couple of years had been suffering from headaches. She had not yet been seen by a specialist and, after giving her an intravenous injection and two injections under the scalp on both sides of the head at the level of the temples, I gave him a referral to a neurologist. A fortnight later they both came again and told me that there was now no need for her to be seen by the specialist, as her headaches were much better and she had not fallen over nearly as often. The Romberg test was positive and a difference in the size of the pupils prompted me to refuse to give any further treatment, despite the improvement achieved, and to insist on her being examined by a neurologist. Six weeks later, I received the shattering news: inoperable brain tumor, death on the operating table. Had I acted differently, I could not have forgiven myself.

The patient comes to his or her doctor with the idea that, in order to cure him or her quickly, all one needs to do after a "thorough" examination (all the better if carried out with expensive equipment) is to produce the "right" diagnosis. We know that if we use conventional methods this will be possible for barely a third of all cases. As neural therapists we make our diagnosis by starting from the beginning and do not treat symptoms or diagnoses but the whole sick person in front of us. In order to do this we try to follow the threads that lead us back to its origins, to find any blockages in the basic autonomic system and unblock them as far as that is still possible. For us, every case is unique, and we regard neural therapy as a very individual form of treatment. In addition to normal diagnostic ability, the prerequisites for neural therapy are above all an etiology-related clinical history with regard to segmental disturbances or interference fields, and thorough inspection and palpation.

Apart from the psychological and verbal contact with the patient, we attach great value to the physical contact we are able to establish with our hands, i.e., handling him or her, in the original sense of the word. This physical contact plays an important part that we are not always conscious of. Bischko writes that acupuncture will not work if the therapist insulates his or her hand by means of a rubber glove. Could the transfer of energy and a not yet measurable interaction between physician and patient be so important a factor? And has not physical contact as the original form of treatment been all but forgotten? Similarly, we have almost forgotten to use our senses in the way that the physicians of old used theirs. It would not be a bad thing if we were to make a conscious attempt to learn this art anew. The physicians of old had to depend on their senses, because they had no apparatus and equipment to rely on. Nowadays there is a formidable barrier between doctor and patient: the doctor's desk, a multitude of gadgets, money in the form of pharmaceutical sales promotion, the great paper war. These have separated the two erstwhile partners by so great a gulf that the physician's influence on his or her patient is bound to suffer on that account alone. Contact means not only touching and feeling, but also influence, and this is something that we must not relinquish.

Without doubt our way of making contact with our patient and of examining them takes more time than simply indulging in the reflex action of writing out one of the standard anti-symptom prescriptions. What is more, we are always dependent on our patient's active cooperation, since they must provide us with their detailed history to guide us to disturbed tissue and to

their hyperalgetic points. They have to report accurately on the reaction produced by our injections. Inaccurate, unclear, or false information can mislead us. They must know precisely what we need to know from them and how we see the way to treat their condition successfully. For this purpose, we need first of all to provide them with the essential basic information on neural pathology. The chronic lack of time amongst doctors is bound to lead to a lack of information and communication, and this in turn must lead to unnecessary anxiety in the patient, or worse still, to them becoming resigned to their fate. Since there is no time for adequate information during surgery hours, I have produced an information booklet for the patient, with the title *Facts about Neural Therapy According to Huneke*, which has also been printed in English by Haug, Heidelberg. This enables the patient to read, at home and at their leisure, about all that they should know and observe, and facilitates their cooperating to the best of their ability since they know what to expect and what is expected of them.

Let us now turn to the examination itself, which must be carried out before we begin with our injections.

Skin

The area of the epidermis, cutis, and subcutis that is affected by a spinal nerve is considered a dermatome. In order to assess the functional condition of the skin, a wide range of methods of investigation is available:

a. inspection and palpation;
b. sensory tests;
c. measurement of skin resistance and skin capacitance on closely circumscribed reaction sites;
d. measurement or estimation of dermographic intensity;
e. measurement of the intensity of infra-red emissivity;
f. estimation of the intensity of the erythema produced by a given dose of radiographic radiation;
g. determination of the number of cells in the exudate from blistering plasters;
h. examination of the capillary bed under the microscope;
i. leukocyte count for the skin area under investigation and comparison with leukocyte count from healthy skin areas (Bergsmann).

All these are comparative methods. They all face us with the problem of deciding which skin area can be described as normal for the purposes of such a comparison. For some of these methods, complex and expensive equipment is necessary.

For the practicing physician, inspection and palpation are, with a little practice, both simple and adequate methods of examination, which can tell him or her a great deal that the patient cannot. For correctly sited segmental therapy, we are first of all interested in the turgor of the skin and especially in any visible and palpable locally defined changes.

Inspection: We can recognize irregularities by merely looking at the area in direct light or indirect light. We have to look for areas that obviously lack proper blood circulation, for dystrophic areas, dermographism, "goose bumps," increased visibility of surface veins, pigment changes, skin atrophy, erythemas, mottled skin, irregular hair growth, perspiration, muscle atrophy or hypertrophy etc., and, most of all, scars; this includes scars on the bones. Frequently, an old clavicle fracture with thickening or dislocation at the fracture site can be found without the patient's recollection of the injury. Another example is the site of unilaterally indurated muscles along the spine that indicates where muscle hypertrophy tries to support the area of a disk injury.

Palpation: Often, we regrettably neglect the use of our hands, which are the best and least expensive examination tool. We should learn to use them again for diagnostics and treatment and improve our dexterity.

The heat emission of the skin can be measured roughly but precisely enough by placing a flat hand right above or lightly on the skin. Correlating parts on both sides of the body can be compared and the differences in temperature in the area of the head, the trunk, and the extremities can be located. With some experience, the difference in skin temperature can give reliable diagnostic indication for peripheral capillary and venous circulation.

For palpation purposes, the skin has to be oiled. Initially, only gentle pressure through the finger pads may be applied. The pressure has to be light enough for the skin not to bunch together and the patient not to experience pain. The displacement (see Fig. 1.**14**) of the skin depends on the condition of the subcutaneous tissue. The ease with which it is possible to displace the skin relative to the subcutaneous layers can become reduced locally to such an extent that in passing one's fingers gently over the area one has a sensation as if the skin were being held tightly from within. We have to increase the pressure to better locate zones with reflex changes per increased turgor and tonus, i.e., increased tissue tension, doughy swellings, depressions or retractions. This is done by pushing our finger pads cranially across the skin and applying superficial pressure that creates a fold of 2–3 cm thickness in front of the fingers. Painful palpations immediately cause a reflectory tension response, which renders further inspection and palpation useless. Pathologically changed tissue absorbs the skin fold. Tension difference in the subcutaneous tissue and the muscle tissue below as well as the skin temperature can be indicative of crucial regulatory disorders in an organ or a Head's zone.

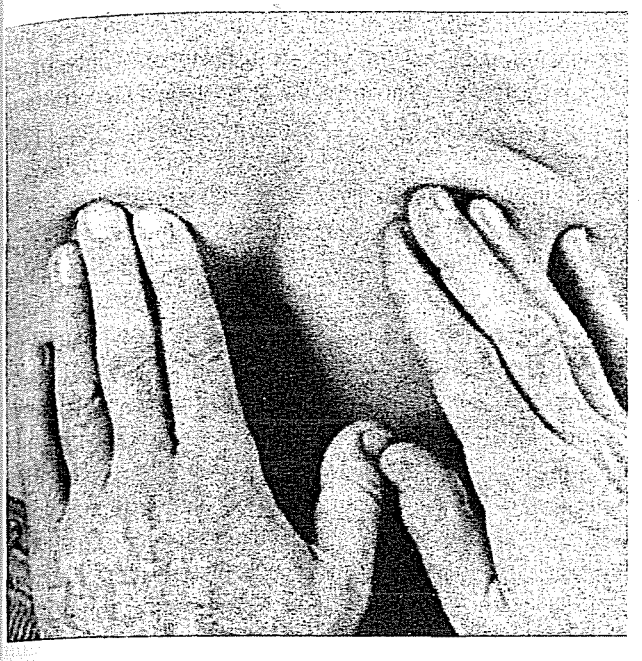


Fig. 1.14 **Skin displacement test.** On the left the skin fold disappears.

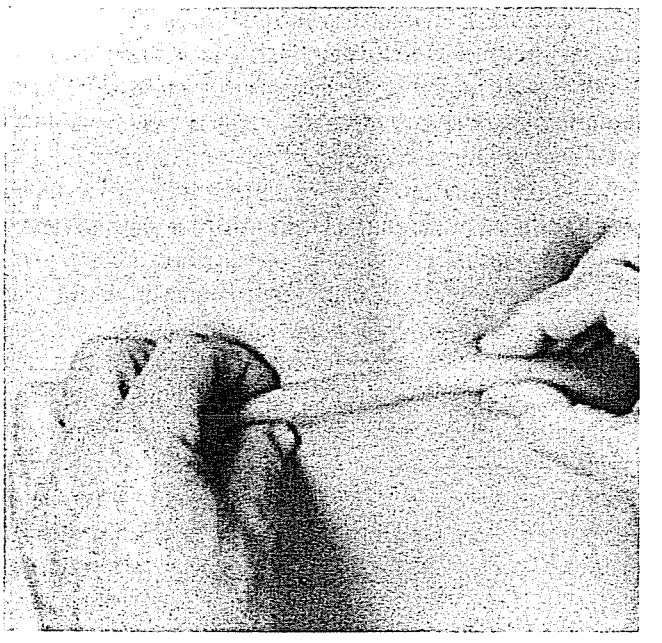


Fig. 1.15 Rolling of the "Kibler fold" from caudal to cranial.

In the lumbar area, the skin fold is lifted between thumb and index finger and rolled cranially through one's fingers (Kibler) (see Fig. 1.**15**). Where the rolling of this fold meets resistance, we locate a site for quaddles or deeper infiltrations. The examination method for the abdominal wall can be found under → (T) preperitoneal injection. We always examine front and back of the patient.

Diagnosing the affected side: To answer the question, in which side of the thoracic and upper abdominal area organ disorders might be found, we test the trapezius muscle above both shoulders. We do so by comparing the pressure applied with both hands, the strength of the right and left side, and the degree of tension and pain. We also search for fibrocitic nodules. Thoracic and abdominal disturbances are projected through the phrenic nerve to the area of C3 and C4, i.e., neck, throat, and shoulders. As we will learn later, tapping of the spinous processes provides an additional method of level diagnostic, which is the localization of a disturbed segment.

After we have located the reactive zones and their trigger points, we can palpate with increased pressure into deeper layers to demonstrate to the patient that we have found the areas where pathogenic changes correspond to the surface of the body. The patient is frequently unaware of these areas. Pathologic processes of internal organs can stimulate the skin and its deeper tissues in such a subtle way that pain is not reported to the brain. The additional stimulation through stronger palpation can end up being sufficient to turn a latent zone into a painful zone. Its location within the Head's zones (see Figs. 1.**16**, 1.**17**) may provide important clues about beginning, existing, or subsiding changes in corresponding organs. They speak to us in their own language, and we need first of all to make ourselves conversant with this language and then to practice it; we can never practice enough. Curing these skin changes by neural therapy can decisively influence the course of the pathological processes involved.

The time that is required to carry out these examinations, is time well invested, for both the physician and the patient. It saves needless injections and considerably curtails the segmental therapy. After the treatment of reflex disturbances in reflex zones, positive changes found through palpation confirm the therapeutic success. If we still encounter connective tissue turgor, increased muscle tone, and palpable fibrositic nodules, we should continue the inspection.

Every scar in a segment showing sensory changes is of at least equal importance to us, no matter how small it may be, how old and apparently symptomless. We are all the more interested in scars following injury or prolonged suppuration, and in embedded foreign bodies such as splinters, bullets, shot, shrapnel, and orthopedic pins and wires, dental implants, cardiac pacemakers etc. Patients often draw our attention to lentil-shaped, hard, raised plaques in the skin (generally in the lower extremities), about 1–2 mm in diameter, which they feel as hyperesthetic points. Presumably these are proliferated nerve-end plates. Fingernail pressure on such a point can often produce pain at a remote spot. I myself have such a point on my left thigh, which, incidentally, does not lie on an acupuncture channel. If I scratch there, I produce a pain on the ninth rib in the anterior axillary line, which I can normally feel only

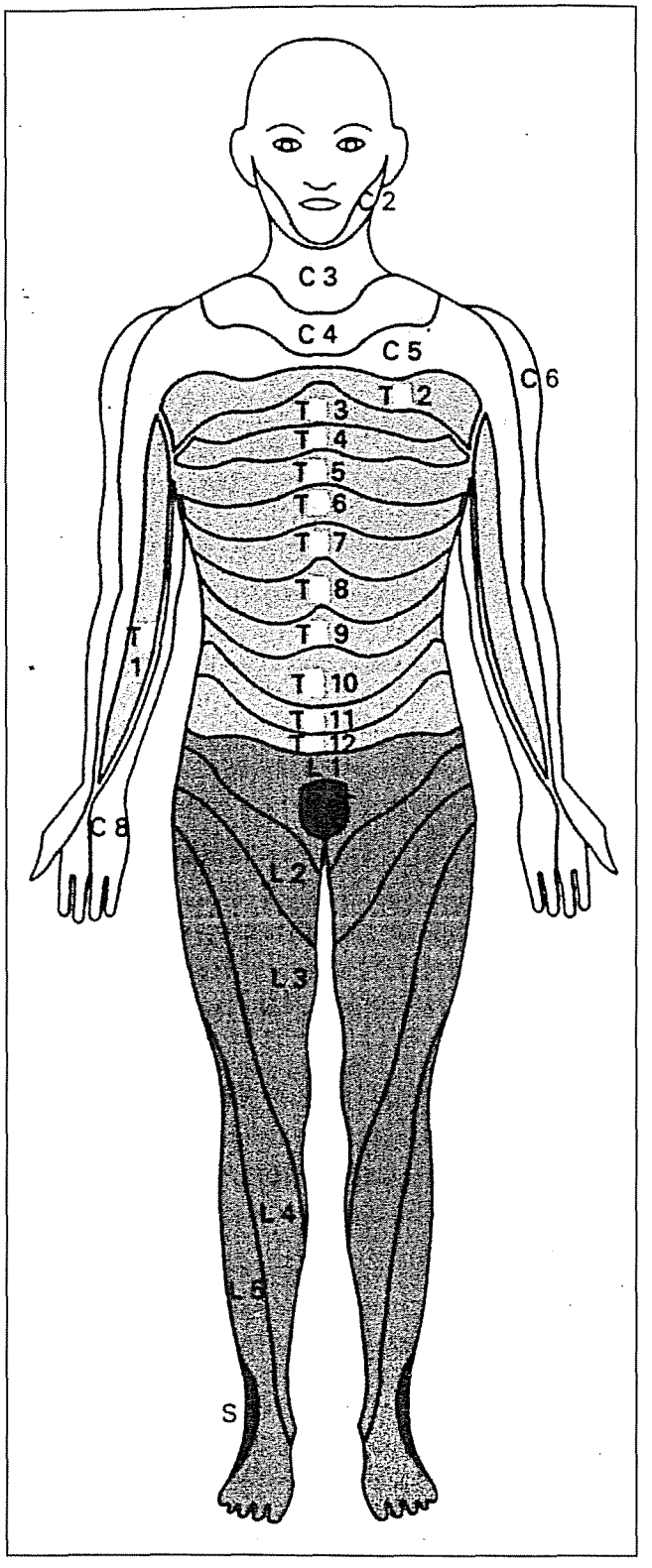


Fig. 1.16 Head's zones (anterior aspect) (see also Fig.1.17).

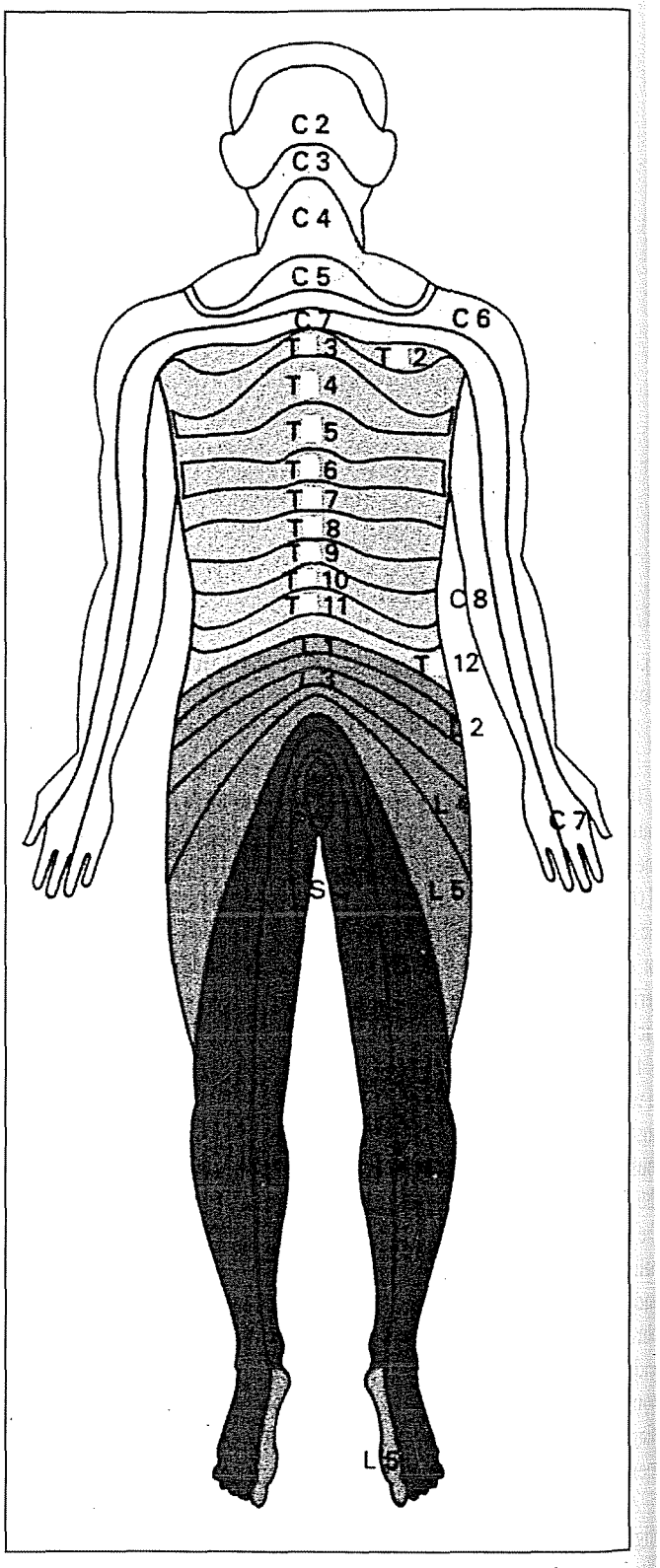


Fig. 1.17 **Head's zones (posterior aspect).** The segments of the body (Head's zones) are designated according to the segments of the spinal cord from which they are supplied. They are divided into the following groups in accordance with their next-exit points in the vertebral column: eight cervical or neck segments C1 through C8; 12 chest, thoracic, or dorsal segments T1 through T12 (D1 through D12); five lumbar segments L1 through L5; five sacral segments S1 through S5. Skin, segmental tissue and internal organs supplied from the same spinal-cord segment form a single functional entity in which every part influences every other by reflex action.

when pressure is applied locally. Needless to say, we treat each such point by placing an intracutaneous quaddle (bleb) over it, until it has lost its irritant activity.

We test for skin hyperesthesia with a wisp of cotton-wool or with a brush, and for hyperalgesia either with a pin or by rolling over it with a pattern-tracing wheel such as is used in dressmaking. The following is another possible method. Lightly hold a thin 160 mm-long needle by the haft between thumb and forefinger and allow the point to fall flat on the skin a number of times in a whipping, springy fashion (i.e., parallel to the skin surface). Over hyperalgetic zones the patient will state that he or she can feel a burning, pricking, or tickling sensation. If, for example, we find such a zone over the angle of the jaw, we may conclude that beneath it there is a chronically irritated tonsil. This test with the needle can also be used over the teeth, the sinuses, and especially over the appendix and gallbladder. The patient need not be conscious of any hypersensitivity of any particular areas. Before every injection we need to look, feel, and press conscientiously, in order to track down all sensitive and painful points. If we do this thoroughly, we shall be surprised at how much we can find that the patient has hitherto been unaware of.

Connective Tissue and Musculature

When examining muscles, one has to pay attention to local muscle atrophies, scars due to muscle tears, fasciculation, and limited mobility. It should be clarified through differential diagnosis whether the origin of the latter is muscular, articular, radicular, or neurologic. This is important for the correct placement of the injection.

A pain stimulus produces a reflex, primarily in the segment, which the system responds to by efferent somatic and autonomic means. In the somatic field, muscle spasm is produced, which may extend to becoming a block in the segment. Autonomic reaction may take a variety of forms. Depending on the patient's reactive state, there may be more or less pronounced vasomotor effects, changes of skin temperature, and circulatory disturbances in the underlying tissues, and even functional disturbances in internal organs. Finally, via neurohumoral regulating mechanisms, there may also be autonomic changes outside the segment.

Nociceptive stimuli produced by internal organs are always accompanied by visceromotor reactions in the motor system, such as pain and spasm, which may extend to blocked joints. When examining the prone patient's dorsal musculature and the trapezius, one generally finds deep-lying indurated muscles on both sides of the thoracic spine. We regard these as reflex reactions due to functional disturbances in internal organs. These disappear under anesthesia, whilst the coarse fibrositic nodules are still palpable. These can still be found for some time after the organic dysfunctions have disappeared, since the reduction of local irritation can be delayed. In other cases, blocked joints may have taken over as interference fields and continue to produce the noxious stimulus. In that event we must treat the vertebral joints by neural and/or manipulative therapy. Manipulative therapy acts directly on the motor function, whilst neural therapy at the same time also reduces reflex disturbances.

Mackenzie's zones lie in connective tissue and the deeper layers. They are tested by lifting the well-lubricated skin between thumb and forefinger, at the same time gently squeezing and pinching it. We can also roll a muscle fold between thumb and fingers or test the muscles by percussion. For our diagnosis, we may also use the method given by Leube and Dicke for finding hyperalgetic tissue in the reflex zones in connective tissue, applying a tension stimulus to the tissues by moving the tip of the third or fourth finger slowly and with varying pressure over the skin in the direction of the cleavage lines. Healthy tissue will bunch evenly in front of the finger and offer hardly any resistance to it. Where there is increased tension, and depending on the site, a more or less deep-seated resistance can be felt. In such cases, the skin and subcutaneous layers can no longer be as readily displaced.

With deeper but still gentle finger pressure it is also possible by this means to locate areas of muscle spasm and the fibrositic nodules (geloses) that can be present in connective tissue. According to Preusser, such nodules are "the objectively demonstrable substrate of neural and humoral processes in the organism, and by their reflex relationships also of hormonal and cellular processes." He sees in them a clogging of mesenchymal tissue resulting from unhealthy living, which can easily disturb and inhibit autonomic adaptive functions. As the finger passes across tissue under segmental influence, the patient will note a curious dull pressure or an uncomfortable cutting sensation. But we do not in fact need to produce a definite pain. The mere statement that the tissue, for example at some depth adjacent to a spinous process, is "not insensitive" must serve as a signal and make us search further. In examining the patient we pay special attention to the paravertebral areas from occiput to coccyx and also to the region of hips and thighs, and we should look particularly carefully at the area between the shoulder blades and above them at neck and shoulders. It is a very rare occasion when we cannot find something there.

Periosteum and Bones

Vogler and Krauss have taught us also to examine and treat the periosteum. They found, for example in gas-

tric and gallbladder disorders and in heart disease, that there were shallow, tender depressions within the related segment at the costal margin, together with irregularities in the contour, and circumscribed atrophy and changes in consistency or a ridge-like thickening of ribs and sternum. By rhythmical pressure and point massage of such areas showing a change in periosteum and bones, they were able to produce a lasting therapeutic effect via the "trophic osteovisceral reflex system" on the corresponding internal organ systems in the segment and on their physiological and pathological behavior.

If we palpate ourselves thoroughly, we shall find that we can produce a sharp pain with unpleasant accompanying sensations from certain well-defined areas on the mastoid or occiput, the temples, clavicles, sternum, the lower costal margin, symphysis, coccyx, or the shins etc. This is a true treasure trove for the hypochondriac! The pain indicates segmental reactions that we can channel in a more favorable direction by a well-placed procaine injection.

Vogler considers all acute inflammatory processes as contraindications for his periosteal massage and also warns against massage of the skull, especially at the nerve-exit points, and of the spinous processes of the vertebrae! We have made use of his experience for our therapy. However, we know of no contraindications or of any points to avoid with regard to procaine injections to the periosteum. In fact, we particularly favor the nerve-exit points on the skull and the spinous processes he warns against. For that matter, we always like to go down to the nearby periosteum whenever we give an injection.

It is by no means unusual to find an interference field in a bone scar resulting from a fracture, and occasionally the same is also true of the periosteum after periostitis. Our treatment of the periosteum calls for no special knowledge or manual dexterity; it takes far less time than massage, acts faster, and has a more enduring effect.

For the examination of the cervical spine, I put my left hand from behind on the right shoulder joint of the standing patient and have the patient rest his or her chin on my forearm. This is the best way to relax their neck muscles. First, my right hand palpates their occipital ridge. It may be indicative of a disturbance in the frontal sinuses or the upper nasal area if the exit points of the greater occipital nerves are pressure-sensitive. Pressure pain is reported considerably stronger on the affected side. I form pinchers with the thumb and middle finger of my right hand and palpate the transverse processes on both sides of the cervical spine through the muscles of both shoulders, from top to bottom. Pressure sensitivity in:

- C1 is a diagnostically useful indication of disturbances in the ethmoid cells, maxillary sinuses, and lower nasal area. A causative connection is confirmed if the nerve-exit points of the infra and supraorbital nerves are also pressure-sensitive.
- C2 indicates a disturbance in the teeth of the upper jaw. Again, pain on the left side indicates the left side and pain on the right side indicates the right side.
- C3 relates to the teeth of the lower jaw.
- C4 through C7 relate to ears, tonsils, thyroid, and the lymphatic drainage area of the throat, particularly in the case of chronic diseases (see Fig. 1.**21**).

As always, all findings have to be recorded in the patient's files because successful therapy can be documented through the disappearance of pressure points (Adler, Langer). If pressure points at C3 do not disappear, we search for interference fields in the area of the teeth, the thorax, and the abdomen.

We test the sensitivity of the thoracic and lumbar spine, the sacrum, and the iliosacral joint by using a reflex hammer to tap each spinous process in turn, or we simply use our knuckles. By this means we often find, where there is an existing or resolving coronary disturbance, that T1 through T5 are distinctly sensitive to percussion and there is tenderness of the corresponding intercostal nerves. A diseased stomach can make T6 through T8 sensitive to percussion, the pancreas T7 through T10. Sensitive lumbar vertebrae L3 through L5 point to disturbances in the legs, a sensitive os sacrum to processes in the true pelvis. Obviously, we must always assure ourselves by taking radiographs that there is no metastasis, spinal tuberculosis, or some other similarly serious condition present. The bones with their richly innervated periosteum give us numerous points of attack, all of which are far too little used. Procaine injections to the painful vertebrae and their spinous and transverse processes can often avoid the need for direct injections to the nerve roots.

For us it is absolutely essential to use a skin pencil to mark all the pathologically changed areas of skin, subcutaneous tissue, muscles, and periosteum found during our examination of the patient, in order to omit none of them during treatment. We can use a segmental table for comparing the anomalies found and for determining the segment and organ to which they refer. The time spent, even by an overworked general practitioner, in the careful determination of hyperalgetic zones and points, skin adhesions, fibrositic nodules etc., will always pay for itself. As a result he or she will be able to avoid useless injections and, not least, spare his or her patient. If there are too many pain points, he or she should look for the points of maximum pain. From the locations of the hyperalgetic zones and points found it is not infrequently possible to read the patient's clinical record, which, as it were, has been stored indelibly in their tissues. In my own practice, I have

found it well worthwhile asking my patients to mark their pain points before coming for treatment, by means of tiny pieces of sticking plaster. By concentrating particularly on these points marked when the patient is relaxed and uninfluenced by the consulting-room atmosphere, a good deal of time and unnecessary work can be saved. One is led much more quickly to the points of departure for segmental treatment. After treatment of the points of maximum pain, patients often state that the pain has now wandered off into an adjacent area. This means that the lower-grade pain has become noticeable only when it is no longer masked by the more severe pain nearby. Our task then consists in also getting rid of the pain at these other sites.

Head concentrated on dermatomes, Mackenzie on myotomes, whilst Leube and Dicke concerned themselves especially with connective tissue. Vogler and Krauss massaged the periosteum. As neural therapists, we need to look for pathologically altered tissue at whatever level, since any that we find is of equal importance to us. As we have seen, all parts of the segment respond as a whole to any stimulus impinging on any part of it. This response may not always be immediate, nor need all the components react to an equal degree. And in addition to the various layers we have referred to, there are obviously isolated nerve and vascular components that may also be involved, as, for example, the tendon and capsule complex around a joint, the pleura, or the peritoneum. In such a case we must also treat these, in order to reach our goal.

From what has been stated it will be clear that we regard the site of the injection and the depth at which the procaine preparation is injected as being crucially important. The skin plays a major part in this, since it is the body's protective layer and is particularly richly supplied with nerves. An intracutaneous quaddle has an extraordinarily far-reaching and deep-acting effect and is all that is necessary in a large number of cases. It acts polyvalently both upon the central regulators and via the terminal reticulum and capillary bed upon the periphery. Anyone who learns to probe through a quaddle into the deeper layers and thus to search directly for any tissue that has undergone change will succeed all the more quickly. The well-placed injection causes the local tissue changes to resolve and the blood supply and pain sensitivity to return to normal. If there should be any residual tissue change or if such change should recur, the injections need to be repeated. Together with the pathological changes at the periphery, the state of the organ generally also improves. Restoration of normal conditions evidently extends into areas about whose relationships and significance we still have no very precise knowledge.

An example from a totally different sphere may serve as an illustration. Every forest fire starts from a tiny flame, which it would be child's play to extinguish. Localized areas of pain in the skin or deeper tissues, which hardly impress us when they bear the banal diagnostic label of rheumatism, may be the harbingers of serious organic disturbances. This is why we take such apparently harmless complaints seriously and investigate and treat them particularly thoroughly.

Segmental diagnosis and therapy have to date been a barely explored territory, and no accurate general explanation has so far been possible of the links between segmental zones and organs. As disciples of orthodox medicine, which is regarded as an accurate science, we have accustomed ourselves to wanting to know the reasons for everything. How rarely and incompletely is this, in fact, possible? Yet we know from experience that pain and local tissue changes can act as pointers to dysfunctions they are directly related to. Generally speaking, they tell us when the body's regulating mechanisms are overloaded. It may seem unscientific, but medically speaking surely right if, as practicing physicians, we relegate the search for the ultimate reason to second place and, by removing a local disturbance, give priority to helping the body to balance out other disturbances related to this, thus breaking through pathogenic reflex processes and re-establishing its internal order. In this manner we are able to provide practical prophylactic treatment, even if its full extent cannot be seen clearly.

After a forest fire, glowing cinders remain as foci along the periphery. A close watch has to be kept on these to ensure that they will not cause a fresh fire to break out. In precisely the same way, resolving organic disease will leave signs in the segmental zones for anything up to 8 weeks or so, depending on the seriousness of the disease. These disturbed points and areas can in their turn disturb the related organ, so that the disease can flare up again at any time as a result of the peripheral stimulus. By extinguishing these significant, smoldering warning signs we are able to accelerate the healing process and prevent a relapse. Cures effected with procaine even allow us to conclude that the engram in the stimulus memory is also wiped out. This also prevents the risk of a "trigger factor" (Speransky) having serious consequences later. We only remove the peripheral disturbances; the regulating and ordering principle within us then restores order.

The tissue changes described above may occur, but they need not. We do not know why this should be so. But this does not mean that in such cases they simply do not exist. With the use of particularly refined methods they can often be shown to be present. However, none of these methods is as yet suitable for the general practitioner, and we can only hope that one will be found that can force the apparently silent segment to make a statement we can interpret. We look to the electrophysiologists, who have already begun to con-

quer this extremely promising field, to provide such a method. The severity of the segmental reaction varies from one individual to another; it may vary from segment to segment and change in quantity and quality in the course of an illness. The type of illness, its location, extent, time, and duration, its course, and the way it ends are all variables that will be different from one individual to another, and may well depend on hereditary and acquired factors, the patient's constitution and general state, his or her general susceptibility and predisposition etc. But it is always the whole of the organism that is sick.

For the sake of completeness, in any chapter dealing with the examination of the patient, it is also necessary to stress that, to us, every test injection to any site suspected of acting as an interference field is an essential part of the examination. The skilled use of procaine is enormously important as a means for obtaining a differential diagnosis and as regards a cure will very often be superior to any standard clinical methods of examination. A negative result of a test injection enables us to say with reasonable certainty that the point we have "interrogated" can be dismissed as a possible cause for the illness. We are thus able to range in on the focus we are looking for until we can make a genuine diagnosis, one that will allow us to help by attacking the cause.

c) Segmental Reactions and their Correct Attribution

Internal medicine merits its name only
if it is able to understand the inside from without.
von Weizsaecker

It would be very nice if all one had to do was to note any pain points and vascular changes in and under the skin, then simply compare these with a segmental table and read out with certainty the site of the disorder. Although with any illness it is the whole human being who falls ill, it cannot be denied that many illnesses have a preference for manifesting themselves in a particular organ or a specific location. Unfortunately, this kind of localization is by no means always possible. Segmental diagnosis is a relatively new field. What it can tell us is the point where the system has been thrown out of gear, but it cannot tell us what the disease might be or what is the cause of the disturbance. Only one thing is clear: all parts of a segment of the human body belong together functionally and anatomically, and respond in concert to any stimulus. To date, however, we remain unable to determine with accuracy the extent of the area covered by all the components that make up a segment.

We are not greatly bothered by the fact that it has not yet been possible to determine the precise extent of these segmental areas, because in any event no organ lies in only a single segment. What is more serious is the extent to which the various theories put forward by different authors on the common boundaries between the various segmental areas conflict with one another. This is due to the fact that whilst one tests sensation, another is concerned with hyperalgesia, here the criterion is the zone of origin, there it is the area affected. Added to these there is the fact that human beings are not made to a single pattern. What is more, the segments overlap, and this also accounts for deviations. A further difficulty results from the fact that a segmental reaction does not remain confined to the autonomic system, but in the area between the sympathetic chain and the spinal cord it can jump across to the other nervous system or may extend upward in the spinal cord itself. In either case, the reaction will involve one or two additional segments.

Generally, segmental reactions occur on only one side of the body, namely where the initiating organ is located. This "unilateral rule" is only rarely broken. However, where a pain persists for a lengthy period, it can jump across to the other side of the body and be present there at a corresponding level. Head explained this by stating that most of an organ's nerve fibers come from one side of the spinal cord, whilst a certain proportion of the total also comes from the other. Anyone who has ever suffered for several days from a toothache will know that the longer the pain lasts the further it spreads. He or she will have found that finally the whole of his or her head, the neck, and even regions that seem to have no direct connection with the teeth will be painful. Without a doubt, psychological aspects also play a part in this apparent spreading of pain. It is very probable that genuine spreading occurs only where there are complications and when the disease is at an advanced stage. If the water level of a lake is lowered, flooded islands become visible. If the stimulus threshold is lowered, the stimulus moves from a latent state into a painful state. If therapy raises the stimulus threshold again, the pain disappears. Here is an example:

- reaction zones in the dental region:
  - first and second incisors: naso-frontal area and eyes;
  - canine and first premolar: nasolabial fold;
  - second premolar: temple;
  - first molar: maxillary area of cheek;
  - second molar: mandibular area of cheek immediately in front of ear;
- mandibular:
  - incisors, canine, first premolar: chin region;
  - second premolar, molars: ear, external auditory canal, angle of mandible;
  - lower wisdom teeth: laryngeal region.

The upper incisors, canines, and premolars often produce disturbances in the region of arms and shoulders, whilst both upper and lower molars often provoke disturbances in the lumbar region.

d) Segmental Zones of Individual Organs

Table 1.1 is based on information provided by a number of authors (Clara, Dittmar, Foerster, Hansen, Head, Martin, von Staa, and others). The first column shows the organ, the second the main areas where the segmental reactions will manifest themselves, and the third gives the segments in which reactions may be found. Looking at this table, we are struck by the frequency with which the zones C3 (neck) and C4 (shoulders) occur. In fact, organ-specific pain is in many cases transferred to the innervation area of the phrenic nerve, namely:

- left: from the left lung, heart, aorta, stomach, pancreas, spleen, jejunum, descending colon, left ureter, left kidney;
- right: from the right lung, duodenum, ileum, cecum, ascending colon, liver, gallbladder, right ureter, right kidney.

Thus, not every shoulder pain is a harmless touch of rheumatism! In addition, this area is quite often the site of changes in the cervical vertebrae, with resultant irritation of the cervical sympathetic ganglia. What, therefore, can a shoulder pain tell us? Hardly more than that there is something, somewhere, that is not as it should be. We cannot always get to the bottom of what it is, but often a few quaddles will be enough to get rid of this local irritation. If in making use of this cutaneovisceral pathway we can succeed in restoring order in the deeper layers where it has been disturbed, we may rest with an easy conscience.

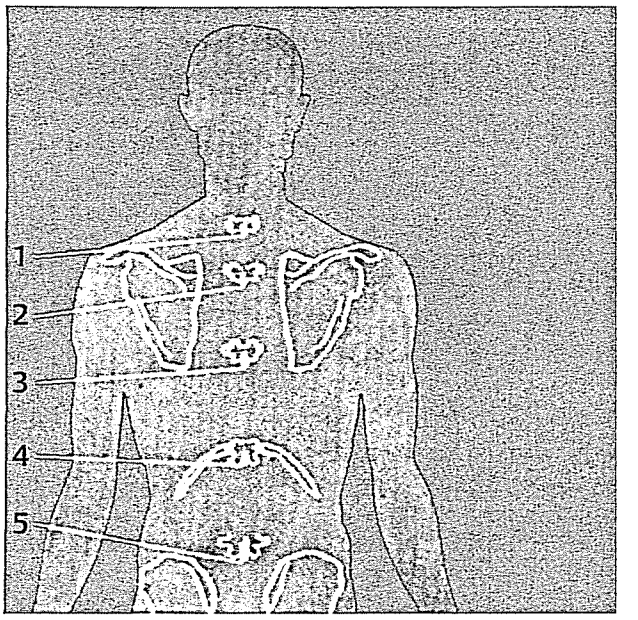


Fig. 1.18 **Diagram to facilitate the rapid identification of certain spinous processes.** The spinous process of the seventh cervical vertebra is the vertebra prominens with its easily visible and palpable process (1); the third thoracic vertebra lies on the line connecting the spines of the scapulae (2); the 11th thoracic vertebra lies on the line connecting the inferior angles of the scapulae (3); the 12th thoracic vertebra can be recognized by its continuation to form the lowest rib (4); the fourth lumbar vertebra lies on the line connecting the iliac crests (5).

Table 1.1 The internal organs and their related segments (pain and reaction)

Organ	Main Incidence		Reactive Segments	
Heart	C3–C4 left	T1–T6 left	C3–T8, trigeminal nerve, mainly on left	
Lungs, bronchi	C3–C4 left or right	T3–T5 left or right	C3–C8 left or right	T1–T9 left or right
Esophagus		T5		T5–T8
Stomach	C3–C4 left	T2, T7–T9 left	C3–C4 left	T5–T9 mainly left
Small intestine		T9–T11	C3–C4	T5–T12
Ascending and descending colon		T11–L1 left or right	C3–C4 left or right	T10–L3 left or right
Liver, gallbladder	C3–C4 right right trigeminal I	T6–T10 right	C3–C4 right right trigeminal I	T5–T11 right
Pancreas	C3–C4 left	T8 left	C3–C4 left	T7–T10 left
Spleen		T8–T9 left	C3–C4 left	T7- T11 left
Kidney and ureter	left or right	T10–T12, L1	C3–C4	T8–L4
Bladder	bilaterally	T12–L3, S2	bilaterally	T10–L5, S1–S4
Uterus, ovaries, tubes, testes, epididymis	bilaterally	T11–L3	bilaterally	T10–L3
Rectum	bilaterally	T10–L3	bilaterally	T10–L3, S2

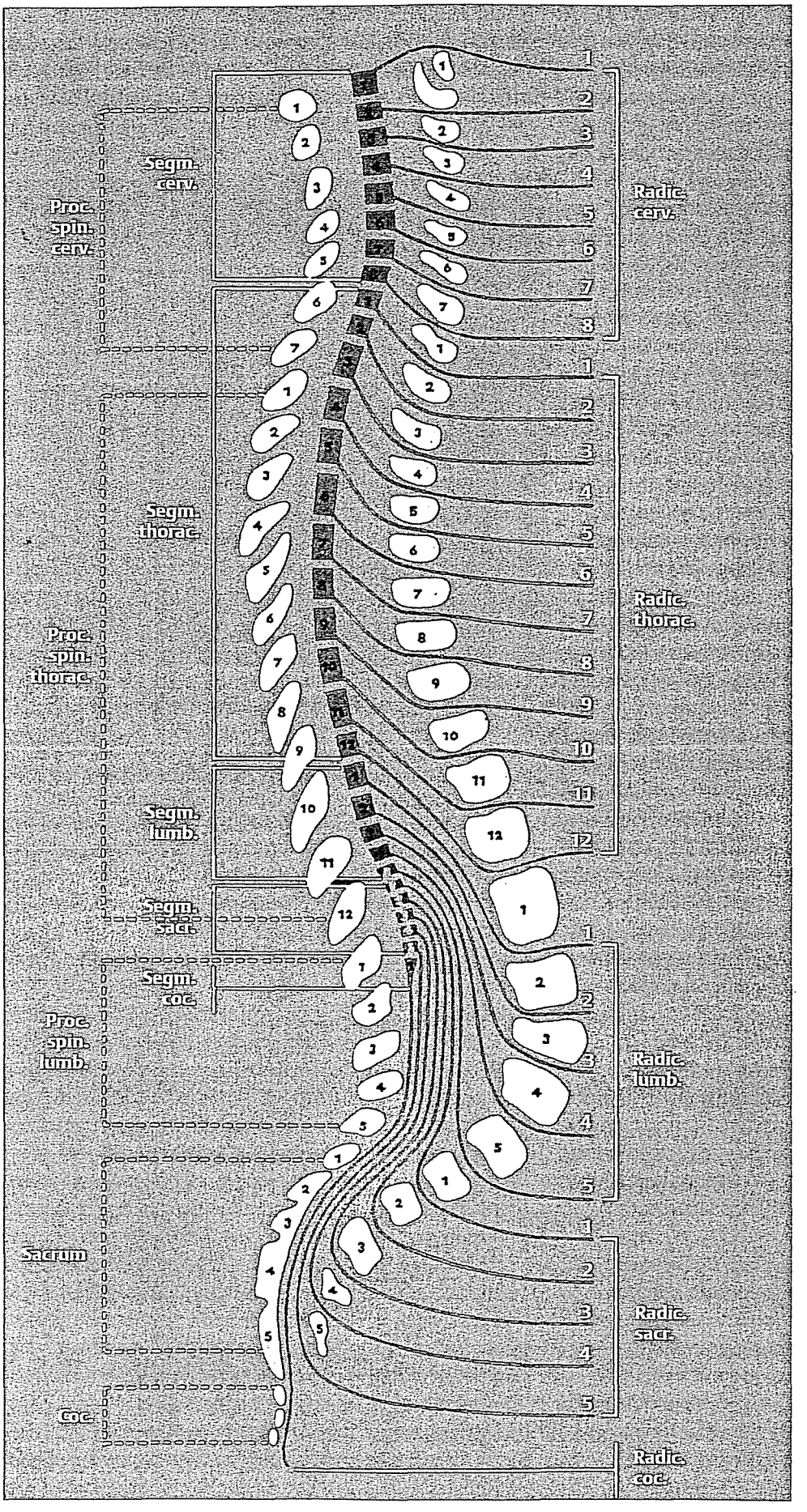


Fig. 1.19 Diagram showing the topographical relationships between the spinal segments, vertebrae, and their spinous processes, and the exit points of the nerve roots.

Diagram of Spinal Nerve Segments (see Fig. 1.19)

Schliack wrote with regard to the delineation of the segments: "the common idea that the nervous system defines segment delineation is incorrect. With the formation of its spinal nerves and spinal ganglia, the nervous system appears to follow the existing structure of the somites. Thus, the term 'neurotome' cannot be supported." The vegetative regulation of the entire surface of the body, including the trigeminal area and the sacral segment, takes place only from segment T3 to L2!

Head, neck, and shoulders receive vegetative supply from T3 and T4, the arms from T5 and T7, and the legs receive their vegetative fibers from the spinal segment T11 and L2. This shows that the reflex zones that we are primarily dealing with exceed the delineation of the dermatomes!

If in terms of the vital processes the segment is, strictly speaking, only a fiction, we nonetheless need to know these anatomical relationships fairly accurately, in order to be able to determine the position and extent of a pathogenic focus in such cases as spinal injury, paralysis, or disturbances in the sensory mechanism etc. Similarly, we need to pay attention to the topography before → (T) paravertebral anesthesia.

For the topographic relationships between spinal cord and vertebral column, the Chipault's rule applies: in the adult, in order to obtain the ordinal number of the nerve roots issuing at any given level, add the following figures to the ordinal number of the spinous process concerned:

- in the upper cervical region +1;
- in the upper thoracic region +2;
- from the sixth to the 11th thoracic vertebrae +3.

The vertebral canal is almost one-third longer than the spinal cord and therefore they are considerably shifted against each other (see Fig. 1.**19**).

The first lumbar segment lies in front of the 11th thoracic vertebra, whilst the other four lumbar segments are related to the 11th and 12th thoracic vertebrae. The sacral segments relate to the region of the first lumbar vertebra.

The spinal cord extends as far as the second or third lumbar vertebra, from which point onward we have the cauda equina and the filum terminale. The dural sac extends as far as the second or third sacral vertebra, and the epidural space as far as the sacral hiatus. When we later come to discuss injection techniques, our knowledge of these boundaries will stand us in good stead.

For the rapid location of certain spinous processes, it is worth memorizing the following surface landmarks shown in Figures 1.**18** and 1.**19**.

2 The Interference Field and its Elimination by Means of a Lightning Reaction (Huneke Phenomenon)

All new knowledge has to overcome two hurdles: the prejudice of the "experts" and the inertia of established theories.

All our efforts in the segment are doomed to failure if the morbid processes are not based on the segment at all or if they are so no longer! Whenever our usual therapy is not successful, we must therefore always bear in mind that interference from a remote point beyond any segmental connections is capable of causing or favoring any chronic disorder. In our experience, this accounts for at least 30 % of all illnesses!

Huneke has shown us that excessive pathogenic stimuli can have their origin in interference fields (centers of irritation), which reach out beyond any segmental principle of order and are capable of setting off illnesses in any part of the body. It is therefore never possible to cure such disorders by any measures restricted to the site of the disorder, not even by surgery, but only by the lightning reaction. Apparently their reflex arc extends all the way into the autonomic centers of the brain. Whilst modern symptom- and organ-oriented therapy must often content itself with identifying and, where possible, treating merely the terminal links of a pathological process, the lightning reaction exerts its normalizing effect at the point of origin of the pathogenetic chain. This accounts for the many improbable cures claimed time and again by neural therapists. In this type of case there is no other way to achieve a cure, even if opponents of neural therapy stubbornly deny that these cures have been achieved.

The interference field is thus something for which, time after time, we have to search. Chronic inflammations, residues of healed inflammatory processes, foreign bodies, and scars; all and any of these can produce such a strong, persistent irritation in the neurovegetative system that it will be in a continually disturbed state as a result of such constant interference. Such a stimulus may come from devitalized or focally infected teeth, from the tonsils, adenoids, or from scars in skin, mucosa, or bone. The prostate, the gynecological area, the liver, gallbladder, or stomach, the appendix, and any other organ within the abdominal cavity or elsewhere can give rise to such an irritative process. In a nutshell: any point of the body can become an interference field!

In my view, an interference field is any pathologically damaged tissue that, on account of an excessively strong or long-standing stimulus or of a summation of stimuli that cannot be ablated, is in a state of unphysiological, permanent excitation. The mutual cybernetic relations between periphery and center must depend on the normal transmission of information and orders, and this can be affected only via the channels of a complete and intact (basic) autonomic system. Nerves function in accordance with the "all or nothing" principle. In other words, all the signals have to be expressed in terms containing only the characters 0 and 1, the classic binary system. This is the same as the only language that a computer, an electronic replica of the brain, can understand.

This signal-transmission code relies on constantly changing impulse frequencies. The disturbances produced by an interference field are always without aim or purpose and are bound to produce chaos because they transmit false information that misleads the regulating mechanisms and is therefore capable of producing calamitous disturbances. If the purposive collaboration between different control circuits is interrupted, they are no longer able to function perfectly as a whole. Apparently, points of least resistance and/or maximum reaction resulting from hereditary or acquired loss of resistance are amongst the receivers of such unphysiological interference. We may draw the comparison with an old wireless receiver with poor selectivity, which receives several stations simultaneously. It cannot produce a satisfactory sound. In a radio, the power of the transmitter, the efficiency of the aerial and the selectivity of the instrument determine the sound quality it will produce. In some of the pathological processes accessible to us by means of procaine, the strength of the interference and the state and defensive capability of the regulating mechanisms play a similar part.

The strength of the differential pathogenic potential and the susceptibility of the previously damaged tissue or organ, irrespective of whether such damage is due to hereditary or acquired causes, in my view determine whether and where a functional or organic disorder will occur, whether it will remain within the same segment or extend beyond it but still remain within the

same quadrant or side of the body, or whether it will jump across any recognizable boundaries and manifest itself in some other part of the body. Our constant task is therefore to find the pathogenic disturbance and eliminate it. As a rule we shall find it either in the segment or in an interference field, only rarely in both. Any chronic illness can be due to an interference field! The exceptions to this rule have already been covered in the chapter on The Failures of Neural Therapy in Section B. This knowledge is not the product of theoretical considerations but of practical experience. Through his new pathogenetic discoveries, Huneke showed us the way to cure disorders due to interference fields.

When we inject procaine or lidocaine into such an interference field, which, as already stated, sets off this type of illness and keeps it going, it is extinguished instantly, complete with all its secondary effects, as far as this is still anatomically possible. A bony ankylosis resulting from polyarthritis cannot be cured via the lightning reaction. But the pain, the inflammation, the disturbed circulation, hormonal shifts, and the numerous attendant symptoms can be eliminated at a stroke. From a diagnostic point of view, this reaction enables us to check, by simple means and without needing costly and time-consuming investigations, let alone surgery, whether there is any causal connection between a suspected pathogenic focus and the pathological disturbances at a remote site in the body. If we find such a relationship, we have the therapeutic means to treat the disease by injections into the focus responsible. If and when symptoms recur, the same injections are repeated with increasing efficacy, until a complete cure is achieved. The most convincing evidence of the effectiveness of this therapy and the easiest to judge is the elimination of pain, but this is fundamentally true also of the other symptoms that disappear.

F. Huneke's teachings on the interference field as a frequent pathogenic cause and on the possibility of eliminating this by accurately placed procaine injections raise a number of questions, which it will be worth answering briefly in the light of the present state reached by basic research:

1. *What causes previously healthy tissue, which, biologically speaking, has been living in a perfectly orderly manner, to form an irritation center capable of interfering so fundamentally in the functions of the organism?*

   Answer: Inflammation, traumatic tissue lesions with or without visible scar formation, unresorbable foreign bodies, and degenerative processes can produce locally circumscribed pathological changes that will have a permanent pathogenic effect. They can, but they need not. Any potential interference field can remain inactive for the time being, because the body's own defenses are intact. Thus, for example, someone with several dental granulomas, scars, and shrapnel splinters can to all external appearances seem perfectly healthy. But when his or her defense threshold is lowered, the likelihood increases that the interference field will become pathogenically active. Such a change can be brought about by any extraordinary stress: a change in the weather, a change of climate, menstruation, the menopause, infections, faulty diet, stress situations such as accidents, surgery, dental-root treatment, serious illness, or psychological stress, or any combination of two or more of these components. Iatrogenic factors can also enter into the picture, such as the prolonged use of large doses of regulation blockers, e. g., corticosteroids, antibiotics, chemotherapeutic preparations, or psychotherapeutic drugs. Every potential interference field is like a time bomb that can explode at any time once it is primed. Every stress acting as a trigger factor can narrow the regulatory range of the pre-stressed mesenchyme to such an extent that the interference field can suddenly become active. In such an interference field, the following changes can be demonstrated:

   - *Patho-anatomical:* Abnormal tissue structure, lymphocyte-plasma-cell or leukocyte infiltrations about unresorbable substances such as foreign bodies (silicates, iron deposits, implants etc.) but also about necroses and other denatured substances produced by the body itself. These changes are microscopically detectable connective-tissue reactions to a permanent irritation stimulus (Kellner, Stacher).
   - *Chemical:* As an expression of changes in the component parts of the basic autonomic system (Pischinger) there are changes in the chemobiological constants, which can be shown by a variety of histological fermentation reactions (Kellner, Stacher).
   - *Physical:* Abnormal values for measurements of electrical resistance and potential in interference fields (Kellner, Schoeler, Stacher, and others), characteristic changes in infra-red emissivity (Schwamm) and unilateral disturbances in the vasomotor system demonstrable by oscillography (Gross).

2. *By what channels are interference-field impulses transmitted?*

   Answer: The interference field as such is generally limited in extent and produces few or no local symptoms. Permanent irritation stimuli nevertheless emanate from it, which continually stress the control circuits of the regulating system with outside energy and are capable of triggering remote disturbances in other parts of the body.

   The effects of such excitation will presumably be limited initially to the well-known cutaneovisceral,

viscerovisceral and similar reflex channels. When the stimulus extends to the next higher activity level, each signal excites several neurons, afferent and efferent autonomic and somatic pathways become co-involved, and the excitation is transmitted to higher-order pathways. As a result, a wider area, possibly the whole of the organism, can ultimately be placed in an uneconomic pre-excitation state. In this, only a slight additional stimulus can be enough to produce pathogenic reactions.

O. Bergsmann explains the interference field-based stimulus dissemination with the trans-segmental autonomic circuit and with myocinetic chains:

> In regard to muscular circuits, the organization of muscles in kinetic chains needs to be considered. Muscles cannot be activated individually but only as part of a trans-segmental kinetic chain. The circuit of kinetic chains is created in the postembryonic development. They serve the automatic execution of preprogrammed motion complexes. In the case of segmental reflex stimulation of a muscle via visceromotor reflex, the entire kinetic chain receives tone because muscle tone extends throughout the kinetic chains. Trans-segmental stimulus dissemination following the kinetic chain is one aspect. The other aspect is the increased muscle tone as origin of tonic-algetic symptoms, which may appear anywhere in the kinetic chain, i.e., at greater distance to the origin of the stimulus.

There is no doubt that both normal and pathological impulses are transmitted in the organism via the neurovegetative system. In this, we include all the neural, humoral, and cellular control circuits (regulating mechanisms) in their interaction. The whole of the autonomic nervous system provides the connection and the exchange of information between all the cells, and it is therefore the channel for illness and cure.

3. *How do the pathological changes in the reacting organ come about?*
   Answer: According to Pischinger, an interference field places the entire organism under stress. He regards interstitial connective tissue and its environment as the organism's basic autonomic system. Any change in the organ environment due to an interference field or focus acts through this basic system via neural and humoral channels, first of all unspecifically, on the entire environment and thus also on the other organs. If at this point the regulating mechanisms are no longer able to compensate and produce an adequate defense against additional noxious elements, disease will manifest itself, with a preference for organs or tissue already weakened by hereditary or acquired damage. Any stress in the basic humoral autonomic regulating system due to an interference field also disturbs to a greater or lesser extent the oxygen-reducing potential and with it also the vital oxygen and energy metabolism. The oxygen-reducing character of the blood and the reactive state of the organism are measurable by iodometry.
4. *What happens in a Huneke phenomenon?*
   Answer: The following processes take place when procaine is injected:
   - A precondition for any inflammation and for many other pathological processes is a change in the electrical potential of the cell membrane (Eichholtz). Procaine repolarizes and stabilizes the cell membrane damaged by the influence of an irritative stimulus (Fleckenstein). In restoring the electrical potential of the cell membranes of depolarized cells by means of the Huneke phenomenon, a pathogenic vicious circle is evidently being broken (Eichholtz).
   - According to Ricker, the stimulus response of the organism follows a law of gradual escalation and is transmitted via the nerves to the perivascular tissues and the capillary terminal (Stoehr) and thence directly to the blood supply and tissues. Siegen proved that procaine, when it is correctly used, is able to restore perivascular innervation disturbed by an irritative stimulus and can prevent all pathological effects of that stimulus on the vascular reticulum and perivascular tissue.
   - Humoral sensitization processes, which in the classic allergy model (Shwartzman-Sanarelli) produce an allergic tissue shock (necrosis) as an "antigen–antibody reaction," can be suppressed by giving procaine at the primary irritation focus (Hirsch, Siegen, and others). This proves that these processes are also controlled humorally and via the nerves, and that they can be stopped by the same route.
   - The abnormal electrical resistance and potential observed before a Huneke phenomenon are instantly restored to normal when procaine is injected into the interference field (Kellner, Stacher, Schoeler). Infra-red diagnosis (Schwamm, Rost) shows that the blood supply in previously disturbed sectors also returns to normal. The oscillograph provides objective proof of the fact that the functional vasomotor asymmetry due to the interference field is also normalized and returns to symmetry (D. Gross).
   - Once the interference-field stimulus has been eliminated, the basic autonomic functions in Pischinger's cell-environment system are normalized. At the same time, all the changes in the blood picture also return to normal (Fleischhacker, Perger, Pischinger). Any asymmetry in the blood picture from the two sides of the body, which has been induced by the interference field, is brought back into equilibrium (Bergs-

mann). Objective proof of this return to normal of the autonomic reaction curve is provided by RC measurements (Kracmar, Maresch, and others) and by biotonometry (Rilling). Iodometry shows that the initially excessive values of the iodine adsorption rate fall again, thus indicating that the oxygen-reducing potential is also returning to normal. Pischinger wrote: "with Impletol we are injecting an oxydizing principle and we thus intervene in the most important function of living tissue, namely cellular respiration." Any means that carries energy in whatever form to the basic tissues sets autonomic functions in motion, especially their fundamental and principal function, i.e., the oxydization and reduction of basic tissue. All other autonomic functions, such as oxygen, ion, mineral, water, and leukocyte balance etc., are ultimately determined by the electrical potential of tissue and cells. Kellner showed in detail how calcium, sodium, and other electrolyte values in the serum returned to normal soon after a Huneke phenomenon or the elimination of a focus.

To summarize all this in cybernetic terms, one might state it as follows. An interference field is the source of a permanent excitation that hardly ever shows itself in the form of symptoms, but which places all tissue, humoral, and neural control circuits in a subliminal state of excitation. In accordance with the law of propagation governing neural interconnections, the excitation spreads from its original and locally circumscribed source to other areas that, as a result, are rendered more labile in all their functions. This is expressed clinically by hypersensitivity and hyper-reactivity. In consequence, banal stimuli may induce an excessive and pathogenic response. The remote disturbance is thus the organism's response to a trigger factor in pre-hypersensitized, previously overstimulated functions.

Anesthesia of the interference field switches off the source of permanent stimuli that make the regulating system labile. The earlier overstimulation of the regulating system is eliminated. The regulatory functions are normalized and return to a stable state in every part of the body. The excitation threshold is raised. As a result, all the symptoms disappear, since the additional stimuli are reduced to their proper value and the response to them is no longer excessive and pathogenic (Bergsmann).

The Austrian pulmonologist, O. Bergsmann, investigated what could be shown to have taken place in the regulatory zones accessible to observation when an interference field or focus was eliminated in the area covered by his specialty. Interference field and focus alike induce a lability of the regulating systems, which provides favorable conditions for disease to become established, in his case, for example, pulmonary tuberculosis. After anesthesia of the interference field, this lability was no longer demonstrable. In other words, the lightning reaction stabilizes the regulating system. Neural therapy is thus, in its effects, a regulating therapy.

Pathogenic feedback is broken, the effective values are adjusted to match the required values, and the body's equilibrium is restored. Banal stimuli that had previously been a contributory cause by acting on the lung disease as extrapulmonary noxious factors now remained subliminal. Chronic disease can be converted to a phase where it will respond to therapy.

Thus, the interference field acts as a persistent irritation that makes regulation as a whole labile. An illness due to an interference field is caused by the pathological response to supplementary stimuli, in the sense of an excessive reaction. The Huneke phenomenon is a complex reaction that eliminates all pathological symptoms by extinguishing the primary interference field and by the stabilizing effect that this has on the regulating system. This phenomenon produces the most remarkable and profound reversal imaginable. The following proven reactions allow this conclusion to be drawn:

- When a focus is extinguished by means of procaine via the lightning reaction, the lability of the regulating mechanism with regard to temperature regulation is eliminated. The pre-existing hyper-reactivity of the vasomotor system and the return to normal that follows the injection of procaine can be convincingly and visibly demonstrated by means of infra-red photography.
- With the impulse dermograph it is possible to prove objectively that the bioelectric system of the skin in the quadrant under stress is substantially disturbed. Anesthesia of the interference field restores normal bioelectrical regulation. The fact that electrical resistance and capacitance in the segment under stress from an interference field show extreme deviations from the norm suggests that the entire regulating system has been rendered labile (Fig. 1.**22**).
- The tuberculin sensitivity of the skin (and probably also of the whole organism) is significantly increased when an interference field is present. Before a Huneke phenomenon, the regulating systems that respond to the toxic products of the antigen–antibody reaction can be shown to be labile. After it, the systems involved in the inflammatory processes become stabilized and sensitivity is reduced.
- The lability of the walls of the peripheral blood vessels can be demonstrated by means of a rheo-

gram. Regulation in the vascular wall proved unstable when interference field and pulmonary process were acting together. When the interference field was extinguished, stability was restored.

- The turgor of the connective tissue, reflecting the metabolism within the tissue, is changed at a stroke when an interference field is extinguished. The reduction of the irritation and its related lability cannot as yet be proved quantitatively, but they can be clearly and easily observed by palpation of the skin and of the fibrositic nodules.
- With increasing pain, muscle tonus is increased. The dyspnea seen in pulmonary disease is due to hyperexcitability of the diaphragm and of the accessory respiratory muscles. The change produced in the amplitude of the diaphragmatic excursions following a Huneke phenomenon can be clearly measured in radiographic studies. The intercostal musculature can be measured by surface myography. Here, too, it is possible to see that an interference field can maintain the lability of tonus regulation. The lightning reaction eliminates this hypertonicity.
- Normally, a motor complex ensures optimum chest expansion with minimum effort. This can be easily ascertained by measuring muscle tonus, and by inspection and palpation. The dyspneic patient has to use more energy for his or her uneconomic respiratory performance. The Huneke phenomenon eliminates the raised turgor and tension and, apparently, also the contributory central dysregulation. Thus, the noxious influences that were causing the defective respiratory capacity are also eliminated. This can be demonstrated by palpation, by spirogram, and with the body plethysmograph (measurement of the flow resistance in the respiratory tracts).
- A spirogram of the patient's respiratory capacity can show the shift that occurs after a lightning reaction, i.e., the respiratory state of rest moves toward the expiratory phase. This suggests that the entire lung-thorax complex is now functioning more efficiently, i.e., more economically.
- Reference has already been made to the fact that focus and the interference field can produce a difference in the leukocyte count between the two sides of the body. Bergsmann assumes that one of the causes for this lies in an asymmetry of the circulation, which is eliminated by the Huneke phenomenon. He sees these processes in terms of a feedback between central regulating system and segmental regulating complex, again as an expression of the lability of the regulating system as a whole.
- Under orthostatic stress (Schellong), the blood-pressure amplitude on the side of the interference field is reduced to a greater extent than on the other side. While the stress continues, the antecubital vein on the side under stress from the focus or interference field has been shown to have a higher oxygen content (opening of arteriovenous anastomoses?). A lowering of the oxygen level is evidence of successful neural therapy.
- Ergometry of the pulse shows that the patient's general efficiency can rise by as much as 50% after elimination of an interference field. This can only be the consequence of the more economical functioning of the various regulating systems.
- Examination with the biolectrical function decoder shows that the electrical skin resistance on the side under stress from an interference field is higher and may even reach complete paralysis. The position of the return currents indicates tissue acidosis and the differences of potential show overexcitation. Successful neural therapy reduces these deviations within a matter of a few hours and thus provides evidence that tissue metabolism is again becoming normal.

All these investigations prove that the control circuits and regulating systems made labile by an interference field reduce the performance of the autonomic system and disturb the organism's economic principle. Elimination of the interference field stabilizes regulation by damping the regulating mechanisms and re-establishes the economic principle. Bergsmann takes the view that this can be proved to apply to all other medical specialties.

Taken all together, these are no longer pieces of circumstantial evidence that can simply be ignored. On the contrary, it is a complete chain of proof of a kind that cannot be provided even approximately for other methods approved by orthodox medicine, such as physiotherapy or psychotherapy. Bergsmann has therefore furnished full and incontrovertible objective proof for the Huneke phenomenon.

5. *Finally, we want to ask what are the indications for and the limitations of this form of therapy?*
   Answer: Lightning reaction (Huneke phenomenon) can occur only under the following conditions:
   - If the disorder is due to an interference field.
   - If the procaine injection or surgery strikes and eliminates the interference field responsible.
   - If the process is still dependent on the interference field and has not yet become autonomous (Speransky).
   - If the neurovegetative system is intact and receptive. This is not (or only conditionally) the

case if a "regulatory paralysis" (Pischinger) has occurred, for example, by regulation blockers such as cortisone or phenylbutazone. This can be shown by objective means through iodometry. In such a case the therapy-resistant illness must first of all be changed back into an acute phase by provocation and reversal methods.

a) The Conditions for a Lightning Reaction (Huneke Phenomenon)

F. Huneke stated a number of conditions for his lightning reaction. These must still be regarded as being applicable:

1. When Impletol or any other neural-therapeutic preparation is injected into the interference field responsible, all remote disturbances caused by it must instantly and totally disappear at the moment of the injection, insofar as this is anatomically still possible. The 100% requirement is an absolute condition. If even the slightest remnant of the disturbance remains, then the reaction cannot be classified as a Huneke phenomenon.
   In a small proportion of cases, complete freedom from all symptoms may be achieved only after an interval of anything up to several hours. But this should not tempt us to limit the "lightning" reaction by such neologisms as "delayed reaction" or "late phenomenon." The neural change takes place instantly, the moment the responsible interference field is eliminated, even if it may seem that the process is delayed. In such cases, the humoral and hormonal systems merely limp along behind the neural process, so that a certain amount of time may have to pass before the change back to normality is noticeable in these areas and the patient becomes subjectively conscious of the fact that all the symptoms have disappeared.
   Still more rarely, Huneke's test (e.g., of teeth) can activate the metabolism of the interference field concerned. In such a case, the test injection acts like any other provocation method we may occasionally use (Spenglersan, cutivaccine Paul Novum). In that case, apart from a local reaction, the basic disorder may become worse. We then have to change the manner in which the organism reacts by stimulation therapy and afterward repeat the injections, or alternatively consider surgical excision of the interference field. Strong negative response to segmental therapy that worsens the existing complaints can be indicative of an interference field at the root of the problem. The above exceptions to the rule are extremely rare and have been given here only for the sake of comprehensiveness.
2. Complete freedom from all symptoms must continue for at least 8 hours in the case of teeth acting as interference field and a minimum of 20 hours for any other location. These figures are the result of more than 50 years' experience. We see no reason to change them. Often, a single injection is all that will be needed to eliminate an interference field permanently.
3. If the earlier symptoms reappear, the injection must be repeated at the same site. The period for which the patient remains free of symptoms must on no account be shorter than on the previous occasion but longer. How many patients have failed to be cured simply because the physician did not know this repetition rule and gave up too soon? By observing it we guard at the same time against basing treatment on a false assessment of the situation. In a genuine Huneke phenomenon the effect must increase both in duration and intensity. Initially, the effect is temporary. With some persistence it can be extended and the patient is pain- or symptom-free. The nervous system is made of adaptive data processors and learns after every repetition from the improved situation. The relieved regulating systems provide the self-healing mechanisms with information regarding economic functioning, which is implemented better every time.
   The "instant cure" dished up with such relish by the tabloids to their miracle-hungry readers does happen now and again, but unfortunately only very rarely and not as a rule at the first attempt. We need to take pains to produce the "miracle of healing" and have to submit to the terms imposed by Mother Nature, and we have cause to be satisfied if each repeat treatment at the reactive site brings us a step nearer our objective. We may talk of a lightning reaction only if all these three conditions are met! Having identified the interference field and given further injections to or into it if necessary, we shall achieve a cure.

F. Huneke took the view that a single interference field may cause several disorders but that any one illness is controlled by a single interference field. He admitted the possibility of a first and second insult acting as trigger factor to the system but maintained that in any disorder only a single interference field can be at work. He doubtless took up this position mainly for didactic reasons. He privately admitted to me, on the other hand, that he had had a number of cases where, for example, a test of the tonsils merely produced a substantial improvement, but only a further injection into the pelvic region was able to complete the lightning reaction. If on repeating the treatment this sequence is reversed, the same result is obtained. In these cases, which F. Huneke allowed only as exceptions to prove the rule,

tonsils and reproductive apparatus together caused, for example, the hip joint to become diseased. We know from practical experience that it is by no means rare to find that what seems to be a single set of symptoms can contain several interference-field components, which can be eliminated only from the various cybernetically interlinked interference fields themselves (see Case History 19, p. 116).

A so-called neighborhood reaction could be present if the test injection into an interference field is only a partial success and does not fulfill the requirements for 100% success. We injected in the vicinity of the interference field. Example: the injection into tonsillectomy scars produces only 80% improvement. Only after injecting the neighboring displaced wisdom tooth, do we attain 100% success.

Interference fields disturb not only the regulating system as a whole. We may not always be able to understand the shifts in the control circuits by which certain organs or systems can become especially involved in the spread of the irritation and may therefore be disturbed to a greater extent and more enduringly. In such cases we must therefore first of all release this "blockage," to enable us to eliminate the disturbance of the regulating system as a whole from some other interference site.

For the present there can be no answer to the question whether earlier treatment in the segment and in searching for the interference field, which may have been regarded as unsuccessful, may not have improved the functioning of the control circuits to such an extent that only the subsequent injection is capable of producing any visible improvement, i.e., that success would not have been possible at all but for the apparently fruitless earlier treatment.

We see that local anesthetics used in neural therapy are not in themselves simply a pharmaceutical remedy, but that by using them we are acting upon normally occurring reactions in cybernetic regulating systems and can thereby clear up previously unknown pathogenetic relationships. Procaine, with which this new art of healing began, is not foolproof like the remedies of "pragmatic medicine" (Jores). It can help only those who have learned to use it correctly, who are completely familiar with its theory and technique and who have decided to think in cybernetic and holistic terms in medicine. They will then be able to make use of the dominant part played in the living organism by the neurovegetative system for healing the sick.

In English, the lightning reaction has also been referred to as "flash phenomenon." This is better than the German form of "instant phenomenon" (*Sekundenphaenomen*), because, like "lightning reaction," it refers to the electrical nature of the process, but neither of these two latter terms is as clear and descriptive as "lightning reaction." The other term, "Huneke phenomenon," is also acceptable (and, in German, much to be preferred).

Many physicians still regard this phenomenon as debatable, controversial. This is especially true of those who consider it impossible in theory and have never witnessed it in practice, who believe that they must ignore it because it has not yet received the blessing of the academic pundits and does not fit into their conventional doctrine. The persistence and inertia of outdated ideas is considerable, a fact on which Max Planck commented as follows: "False doctrines in science take fifty years to die out, because not only the professors but also their students have to die first." Anyone who has once witnessed a Huneke phenomenon will be convinced that it is a fact and that it opens the door to an enormous potential. He or she will no longer be able to escape from its grip or want to do without it. To experience a lightning reaction is to change any physician's attitude for all time, no matter how orthodox his or her upbringing on how disease should be classified according to traditional anatomical and pathophysiological rules. The restoration to normality is often so dramatic that it fulfills all that any doctor may hope for from his or her professional activities. Such an experience will be powerful enough to break through acquired inhibitions in their imagination, because the discrepancy between what they have experienced to date and the reality they have now witnessed oblige them to revise their ideas and to integrate the previously unimaginable into their living world. The number of modern doctors and teachers of medicine who have seen a lightning reaction and who now acknowledge its reality increases year by year, particularly since the two Viennese professors, Kellner and Pischinger, have succeeded in providing incontrovertible objective proof of it by changes in the blood picture and iodometry.

Professor Nonnenbruch, in his monograph *Bilateral Kidney Disease*, was the first scientist who unequivocally backed F. Huneke and his lightning reaction. He wrote in this that:

> it is easy to strike a superior attitude and refuse to accept such observations by relying on old mechanistic causal relationships. I have followed up these matters in greater detail, found them confirmed on numerous occasions and have learned to understand them. In such cases, what is perpetrated in the name of academic knowledge often strikes one as miserable and pitiful and, often enough, irresponsible and indecent. There is an orderly universe which does not depend on man, the essence of which is not directly recognizable but can be understood or suspected only indirectly. This is what we face whenever we look at any vital processes, and those who have practiced the art of healing have made use of it, often without being fully conscious of doing so.

Professor Ferdinand Hoff became convinced in Huneke's Düsseldorf practice that the lightning reaction genuinely existed, although he did not accept Huneke's theoretical interpretation of it. In his 1960 textbook *Treatment of Internal Diseases* he wrote of it that:

> in this context, Huneke's lightning reaction plays an important part. Huneke has shown that local Impletol injections into an interference focus, e.g. a tooth, chronically inflamed tonsils or an old scar can in many cases effect the complete disappearance of long-existing pain at a remote site in the body, perhaps in the knee joint, the shoulders or in the area supplied by a painful nerve. This elimination of pain can last for several days, and if the Impletol injection into the same interference field is repeated, it is even possible to achieve a permanent cure. This statement is so surprising that initially it was greeted with great skepticism and in many cases was rejected out of hand. However, I wish to state explicitly that I have now been able to convince myself in a substantial number of cases that this lightning reaction is a fact. The fundamental principle involved in this seems to me to be of very great importance, precisely because it cannot at first be readily explained by our accustomed forms of theoretical thinking. However, it is precisely the new facts which existing theory cannot explain that are of significance for scientific progress.

Professor Koetschau, in his well-known book *Medicine at the Crossroads*, also argued in favor of the lightning reaction:

> Every proper physician has experienced a lightning reaction at least once, perhaps dozens of times, where the inner physician (Paracelsus) or 'specific energies' produced a complete cure in an 'automatic' manner that defies analysis and whose unanalyzable nature masks the qualitative and quantitative extent of the healing processes that take place. The physician finds that the symptoms have disappeared, the patient feels free of pain and of his disorder, and the record states that a healthy state has been regained. But no one knows what has in fact taken place. This is not strange in itself, for the process of healing has never yet been capable of analysis by the physician, who has merely been able to take note of the fact that the healing process has occurred, without knowing how it has come about. The ideas that are still prevalent today with regard to physiochemical counter-measures are exceedingly naive and primitive. If there were such a thing as a passive physiochemical healing process, it should be possible to demonstrate it on the dead organism. However, the essential condition for every genuine healing process is that the organism be alive. As a result, analyzability of it in scientific terms becomes inapplicable. The idea that it is merely necessary to produce a 'diagnosis' in order to hold the cure by countermeasures in one's hand is therefore false, for the analyzable healing process has absolutely no causative connection with the type of diagnosis usual today. This is true in both senses. If, as we have shown, not even the stimulus is in a linear causative relationship to the reaction to it, then it is true that the diagnosis when it has been made cannot function as a stimulus but is totally divorced from the area of influence of the healing process. There is thus neither a linear nor a holistic causal relationship between present-day diagnosis and the healing processes.
>
> In the case of the lightning reaction, however, matters are very different. In this, whilst we are equally unable to discern any linear causative connections, we can at least see in holistic causative terms that the correctly sited procaine injection produces an immediate holistic reaction. Thus, we are here looking at a genuine cause–effect relationship, if only a holistically causative one. In this process, the diagnosis is cure-oriented and not findings-oriented. Identification is no longer central to it and is replaced by doing something that has purpose and significance, namely to start the healing reaction. When Huneke's therapy produces a genuine lightning reaction, it provides a central diagnosis because it relies on the knowledge of 'where.'

Our critics like to claim that the existence of the lightning reaction has decreased. They proceed to conclude that neural therapy has lost its "suggestive powers" after the demise of its founders whose students are less effective. They refer to our publications, quoting our statement that the Huneke phenomenon can be triggered with less frequency as compared with the time of the Huneke brothers. They omit our explanation of this empirical fact: To this day, Asian, African, and South American peoples who live a more natural way of life respond better to procaine therapy than the over-civilized population of Europe and North America.

All we said was that the Huneke phenomenon is harder to trigger than it used to be. It is not the neural therapy that has become less effective in previous decades but its object, our patients, who have changed and have become less reactive! We believe that the cause for this development can be found in the excessive amounts of environmental and internal stimuli, in particular the chemical contamination via air, water, foods, stimulants, and medication. These toxins limit or block the human self-regulating ability. Perger demonstrated convincingly that the toxically changed bacterial flora of the intestinal tract has become a true interference field in modern humankind and constantly weakens the immune system to a considerable degree. This aggravating circumstance does not only affect neural therapy but all areas of medicine.

There is no reason to resign, dismiss the Huneke phenomenon, and limit ourselves to the capacities of segmental therapy alone. We simply have to adapt to the changed conditions and try to retune our patients' organisms to a degree that they regain their reactive abilities and respond to therapy. This does not apply to every patient. Many patients still respond to interference field tests in the same way as in Huneke's days. Nobody can expect positive results from the Huneke phenomenon if he or she considers its techniques inconvenient or is not sufficiently familiar with them.

We have to put an end to the regulation inhibition of our patients, as long as that is still possible. The noxious agents of civilization have to be broken down and we recommend a more natural lifestyle with organic nutrition, few stimulants, medication, and stresses. Even dental restoration might be required. We have to reverse the patient's reactivity through methods such as cleansing via skin, intestines, and kidneys, the restoration of the intestinal flora, fasting, bloodletting, autotransfusion, balneo, and hydrotherapy, more exercise in fresh air, Elpimed and procaine injections, and so forth. The purpose of these methods is to stimulate the self-healing mechanisms. After an adjustment period of 4–6 weeks, we will intensify our efforts, doing everything in our power instead of resigning too soon. If we stick to our guns we will be able to trigger the Huneke phenomenon. No sweet without sweat!

b) Taking the Case History

The term "neural therapy" stands for a holistic therapy. It therefore requires a holistic diagnosis that must include both body and mind to the maximum possible extent, because we need to understand as much as we can of the patient's personal reactive state and of the way his or her organism is able to react. Neural therapy that fails to take into account the patient's accurate case history cannot be anything but hit and miss. As already stated, we want to deal with causes, not merely with symptoms. In order to do this, we have to trace the patient's ordeal back to its origin (first insult). If any point in the body is capable of becoming an interference field and can thus cause illness, we must, as far as we can, interrogate every point in the body to discover whether it could conceivably be the pathogenic cause. In order to solve the unique problem that every new patient represents, we have to try, by means of as detailed a case history and as thorough a preliminary examination of the patient as possible, to include all the points that might help us to narrow down the probable cause, and to place the injection at the exact point where it is required. Obtaining the case history and the accuracy of the information we are given on pain, previous illnesses, injuries received, and surgery that the patient has undergone, can be crucial to curing them. We need to extract from him or her the specific information we require by leading questions.

To give patients a few minutes to tell us about themselves is of therapeutic value to them and gives them confidence in their doctor. At the same time, it also gives the doctor an excellent opportunity to observe his or her patient. Watching the patient's facial expression and hand movements can often give us more significant information than a stack of all-embracing but inconclusive laboratory reports. We need to "get inside" his or her whole personality in order to become attuned to it. The neural therapist's success thus depends to a large extent on the skill with which they can put their questions and how patiently and attentively they can listen to their patient's answers.

It is particularly important to have patience with and pay close attention to the patient when he or she describes the kind of pain they feel, its severity and extent. This often provides a pointer to where and how we need to attack the problem. From the information the patient supplies, we then need to make a choice and to try to interpret his or her observations and assumptions in the light of our understanding of regulating pathology. This is a process no computer can carry out for us and is an important part of the physician's art. And if we cannot set aside nearly as much time as we should for each individual patient, we need all the more to make the best use of the time that we do have to feel our way to understanding the overall situation and the somatic and psychological components that make up any illness. By this means we shall be able to reach a differential diagnosis within the framework of our therapy.

The best prerequisites for becoming a good neural therapist are those that the average general practitioner already possesses, especially in their function as family doctor in the traditional sense! The general practitioner may not always know quite as much as their over-specialized colleague at the hospital clinic. But instead they complement their scientific knowledge with experience and practical skills, coupled with knowing their patient. He or she knows a good deal of the patient's history, where they work, their private life, and their family. In other words, the family doctor knows his or her patient's psychological, cultural, and social background. As a result, he or she is aware of many of the possible factors that might be at the root of the patient's "present" illness and also knows something of the patient's attitude to that illness. This knowledge and the person-to-person relationship between doctor and patient are in fact almost as important for reaching an etiology-related diagnosis as they are for the correct choice of therapy for the specific illness of the particular patient in question: "Understanding is the path to the cure" (E. Spranger).

In neural therapy we intentionally adopt this family-doctor basis because it is essential to success. We know that more than half the doctors in Germany working within the health-insurance system use neural therapy. It is therefore all the more a matter for regret that so successful a therapy should be accepted only reluctantly in the hospital clinic. We are not always our patients' family doctors. But we need to do all we can as quickly as possible to establish this kind of relationship with our patients, in order to provide the climate and sense of security for them that they may no longer find

in the clinic. We must not merely talk about cooperating with the patient, since this cooperation is essential if we are to succeed in curing them of their illness. Compared with any hospital, the general practitioner's surgery has the advantage of providing a personal setting. The patient is conscious of genuine dedication on the part of their physician and responds to their humanity by devotion to, cooperation with, and by trusting him or her. And trust is one of the basic prerequisites for any cure.

At a time when double-blind trials are all the rage, and in the light of the criticism sometimes leveled at us, it may seem unscientific to occupy ourselves so intensively with the patient. For the exact scientist, the risk of our suggestive influence is too great. As a general practitioner, if I have any choice in the matter, I prefer to be a little less scientific and a little more human in my medical work. My aim is to cure my patient, and the road by which I reach my objective should be of secondary importance. But this is not to say that we act lightly or irresponsibly. We, too, try to obtain an objective picture of the patient's illness, for we have the duty as doctors to prevent greater damage to our patients and to provide the best possible therapy for their condition. One extreme is the medical "apparatchik" who is mesmerized by figures. The other is the mystic whose feet are no longer on the ground of facts and who devotes him or herself to wild speculation. We avoid both these dangers by constantly and critically reviewing our position. By this means we can also avoid the risk of overrating any success we may achieve and thus of becoming one-sided.

Anyone to whom the patient is merely a source of urine, blood, serum, stool specimens, and temperature charts to be analyzed and worked up into statistics will do best to keep off neural therapy. For us, the incomprehensible, unquantifiable aspects of life are more important than cold figures. Whilst the science-oriented physician seems certain that their own strength will be enough to enable them to restore order in the patient, we know that we are simply servants of the ordering principle within the patient. We become doctors of medicine by our training, but we are made into physicians only by our professional work and by our daily rededication to serving the sick. We need to make our own contribution and not merely rely on the drug labeled "doctor."

It is helpful to record the patient's history in chronological order from birth onward, including the onset of the present complaint emphasized in its proper place in the list. Often, this alone will be enough to show whether the present pathological processes had their beginnings following other processes, and these can then guide us to the interference field responsible. In chronic disorders, the following three questions about first insult, trigger factor, and activation of the interference field have often provided me with information that has allowed me to make progress. Let us always remember, "The disease picture is a combination of several factors, never less than two" (Siegmund):

a. In your opinion, what was the most serious illness you have suffered, the one that seemed to take most out of you?
b. What illness, injury, surgical operation, and the like can you remember as the last before you started the present illness?
c. When you are under severe physical or psychological stress, do you tend to have local symptoms, such as "rheumatism," at any specific and regular site, including any stress that may occur when there is a change in the weather, when you have a fever or a period? Has this site ever been involved in any injury, inflammation, or surgery? Do your scars itch occasionally or does your appendix or a toothache at times? When the stimulus threshold is lowered, an interference field that normally produces few or no symptoms can suddenly become supraliminal and signal its presence.

Articular rheumatism that began following a severe tonsillitis will naturally make us think first of all of the tonsils. A woman suffering from asthma, which, she told us, started during the puerperium, was permanently cured of her complaint after two injections into the pelvic region. But let us keep to asthma for the moment, in order to show how little this "diagnosis" can mean to us, because in therapeutic terms it helps us no further. A pensioner who had to pass water every 10 minutes while his attacks lasted was cured of his asthma by a series of injections into the prostate. A young man who had brought back this complaint from the wars owed it to a neuroma following a gunshot fracture of the hand. A 10-year-old child who, at the age of 3, had had a tonsillectomy and adenectomy was cured of his asthma when I injected procaine to the tonsillar poles and the adenectomy scar. Four cases of asthma, four apparently identical and yet essentially different illnesses, with the therapeutic approach to each totally different. Unfortunately, matters are not always as simple as this. A further case of asthma will serve as an illustration.

Case History 2: Craftsman with Severe Asthma

A craftsman had had a laryngectomy 5 years previously, in order to remove a malignancy. Following this, he began to suffer from such severe asthma that he had to stop work. Treatment by a row of specialists produced absolutely no improvement. A search was made for bronchial and pulmonary metastases, without yielding anything positive. Segmental procaine treatment, comprising intravenous injections, quaddles to chest and back, and treatment of the surgical scar, even injections

into the stellate ganglion, had hardly any effect. The distressing cough persisted day and night. Dental radiographic studies showed a retention cyst. A procaine test of this point produced a lightning reaction with a completeness that was all but incomprehensible to all concerned. After the cyst was removed surgically, the patient was completely cured and could reopen his business.

This patient's history demonstrates the practical importance of Speransky's teaching with regard to the trigger factor. Any neural therapist would first of all relate the patient's asthma to his laryngectomy, since the complaint had first manifested itself following this operation. But the cure proved that the cyst had formed a latent interference field even before the operation. At that time, however, this source did not apparently cause any remote disturbance. The laryngectomy, a shock to the whole organism, acted as trigger factor, which enabled the latent interference field to manifest itself and the illness to break out. A fracture, tonsillitis, any wound, any one of 100 stimuli, even a psychological shock, might equally well have caused the pitcher to overflow. In this case, therefore, the true cause of the illness was not the surgical operation. It merely acted as the trigger. Only the procaine injection or the surgical removal of the cyst could break through this block and, having done so, set the neural signals to "cure."

What we need to look for in a clinical history must therefore, if possible, show clearly to what stress the neurovegetative system has reacted most strongly, and following what illness there would seem to have been a lowering in the performance of the regulating functions or the start of the present illness. We may not always discover this, and, in such cases, we must first exhaust all the possibilities of segmental therapy. If these take us no further, there can be no other motto but "Seek and ye shall find!"

When we take the family's health history, in addition to hereditary diseases, diseases that occur with greater frequency amongst family members are of particular interest to us. They can indicate the inherited weakness of organs or organ systems. For example, frequent migraines may indicate weakness of vascular regulation systems and the tendency to develop asthma and bronchitis may indicate weakness of the lungs. Diseases of the stomach, liver, gallbladder, kidneys, such as nephrolithiasis, diabetes, rheumatism, gout etc., indicate accordingly.

As regards interference fields, we need to ask our patient about the following previous illnesses when we write down his clinical history:

- *Abdomen:* Hepatitis, cholecystitis, gastric or duodenal ulcer, dysentery, cholera, typhoid fever, pancreatitis, infantile dyspepsia, irritable bowel syndrome, chronic diarrhea, chronic constipation, colitis, food poisoning, abdominal surgery (for example, umbilical hernia, appendix, hernia), renal calculi, nephritis?
- *Bones:* Fractures (collarbone, ribs), painful coccygeal contusion, periosteal disease, osteomyelitis, Scheuermann disease and other aseptic necroses of bone, rib resections, surgery to fingers and toes (hallux valgus)?
- *Brain:* Meningitis, encephalitis, cerebral concussion or contusion, traumatic epilepsy? Febrile convulsions as an infant? Was the patient's birth difficult (forceps, breech presentation)?
- *Cheeks:* Mumps?
- *Ears:* Suppurative otitis media, total mastoidectomy, frequent otitis externa, paracentesis, injuries, frostbite, deafness?
- *Eyes:* Inflammations, injuries, surgeries, photophobia, illacrimation?
- *Foreign bodies:* Shrapnel, broken needles, glass, grains of sand, pinned bone fractures? Endoprostheses? Have different metals been used for dental fillings? Cardiac pacemaker?
- *Neck/throat:* Rear-end collisions, diseases or surgeries of the thyroid, globus sensation, anxieties, diseases, or induration of the lymph nodes, pharyngytis, cervical fistulas?
- *Nose, sinuses:* Complaints involving the maxillary and other nasal accessory sinuses, chronic (including unilateral) catarrh, hay fever, offensive nasal discharge, constantly blocked nose, nasal polyps, deviated septum or septal surgery, supraorbital neuralgia?
- *Pelvis:* Women: gonorrhea, pelvic inflammatory disease, vaginal discharge, dysmenorrhea, menstrual abnormalities, abortions (febrile?), terminations of pregnancy, D&C or other surgery; difficult deliveries such as forceps, breech, perineal tear or episiotomy? Does the patient use an intrauterine device and for how long? Men: venereal disease, orchitis or epididymitis, prostatitis, prostatic hypertrophy, micturition difficulties, non-specific urethritis? Frequent nocturia?
- *Scars:* Surgery, wounds: location of any shrapnel, bullet, shot still present? Injuries, boils, carbuncles, persistent infections, abscesses, fistulas, varicose ulcers, abscesses or infiltrates due to injections, penetrating wounds, plastic surgery, laceration of the perineum? Birth injuries due to forceps delivery? Look particularly for scars on hands, knees, and feet. If necessary, carefully examine the completely nude patient, including the soles of his or her feet. Every human being has scars and the smallest amongst them may be important. This is especially true of head and neck scars.
- *Skin, subcutaneous tissue:* Chronically painful or itchy areas should be marked by the patient at

home, by means of small triangular pieces of sticking plaster. Ecthyma and other pustular skin conditions, leg ulcer, painful varicose veins, sites of earlier thromboses, recurrent skin inflammations such as neurodermatitis, torn ligaments, lacerated muscles, arterial ligatures etc.?

- *Teeth:* For a proper evaluation, a complete set of dental radiographs is indispensable, preferably accompanied by vitality tests. Any devitalized tooth or dental granuloma can be an interference field, even if completely asymptomatic. Any root resections, dental fistulas, gingival pouches, pivot teeth, residual roots, cysts, displaced teeth, teeth that hurt occasionally, gingivitis, stomatitis? Were wisdom teeth surgically removed?
- *Thorax:* Tuberculous processes, pneumonia, pleurisy, pleural adhesions? Endocarditis, myocarditis, pericarditis, cardiac infarction? Thoracic contusions still sensitive to pressure or tapping (sternum, xiphoid)? Mastitis, lumps in the breast?
- *Tonsils:* Diphtheria, scarlet fever, frequent tonsillitis, tonsillar abscesses, tonsillotomy, tonsillectomy, adenoidal proliferation, retronasal angina, adenectomy, the sensation of having a lump in the throat, bad breath?

In establishing a clinical history, the patient should also be asked the following questions:

a. Is he or she under treatment with long-term anticoagulants (coumarin derivates such as Marcumar, Coumadin, Sintrom, or heparin and heparinoids) or does he or she have a tendency to bleed excessively? Where the prothrombin value is below 45% (–70%), deep injections should not be given. On the patient's record card, an eye-catching note to this effect should be made (see Part III, Chapter 5: Procaine Hypersensitivity and Accidents). An adequate note has to be made in the patient's records, using a red marker.

b. Does the patient suffer from any allergies? Has there ever been an episode during dental work or surgeries with local anesthesia? Does he or she have an allergy card? We are particularly interested in para-group allergies, not because we buy into the fear that is played up by the pharmaceutical industry regarding the alleged danger of anaphylaxis with the use of procaine (1% solution without additives) but merely for liability reasons. Following the current standards, a possible allergy to procaine must be checked by testing as follows: if within a minute of administering a drop of procaine solution into the eye, the conjunctiva inflames, or if the skin becomes erythematous within 15 minutes of setting a quaddle, we use 1% Xylocaine, (Xyloneural) or 0.5–1% Scandicaine instead. Is there any allergy to sticking plaster?

c. High-dosage long-term use of regulation blockers (Perger, Pischinger) can inhibit the effectiveness of our treatment for weeks or months and, in extreme cases, even produce regulatory paralysis. We therefore need to know whether and in what doses he or she is taking glucocorticoids (prednisone, cortisone etc.), chemotherapeutic preparations with immunosuppressives and cytostatics, antibiotics, anti-rheumatics (e.g., phenylbutazone), anti-phlogistics, heavy metals, and psychopharmaceutics (anti-depressives, sedatives, tranquilizers, hypnotic drugs). Ionizing radiation treatment must also be borne in mind in this connection. If neural therapy does not have the usual effect because the regulating system is overloaded, regulation blockers—if permissible—have to be discontinued and replaced with biological means. Reversing measures should be employed before the treatment with local anesthesia is repeated.

c) Searching for the Interference Field

Most interference fields will be found in the region of the head. This fact is explained by the proximity of head foci to the neurovegetative centers. In this group, the tonsiliar interference field is the principal interference field.

Tonsils

Even the most experienced eyes cannot tell by inspection alone whether the tonsils might be acting as a pathogenic focus or not! We all know from experience how often chronically infected or deeply fissured hypertrophied tonsils have been removed on specialist advice without the slightest positive result, and how many are still being removed daily regardless of this. Extensive statistics compiled by university clinics have, however, shown that cures are achieved in only about 50% of all cases of those undergoing tonsillar surgery and relapses occur in exactly the same proportion amongst tonsillectomized cases as amongst the untreated. In the light of this, Hoff described the results of surgical focus eradication as "shatteringly poor." Despite this, doctors continue to be divided into two opposing camps: those who favor tonsillectomy and those who oppose it.

However, every physician has a simple method for checking, with a probability bordering on certainty, whether the tonsils have any causative involvement in a pathological process, by using the tonsillar test (→ (T) tonsils) according to Huneke. By taking advantage of this, the physician can spare the patient the need to undergo useless surgery if the test is negative. In accordance with the tenet "Thou shalt not harm," we

even have the duty to perform this test before undertaking any tonsillar surgery. Daily experience proves to any neural therapist how often the scars following enucleation of the tonsils turn into interference fields and thus cause other illnesses. On the other hand, it is extremely rare for tonsillectomy to show tonsils to have acted as an interference field when a technically correctly executed test has been negative. This does happen now and again and, when it does, it is trumpeted loudly and persistently into the world. But such an occasional failure is no valid reason for disqualifying this test as unreliable, for it remains a fact that it has helped to cure hosts of sufferers.

If a patient tells us that he or she has had diphtheria, scarlet fever, frequent tonsillitis, or even tonsillar abscesses, this should be reason enough to use our test injection to check their tonsillar tissues. In the case of farmers, gardeners, building workers, and others who work mainly out of doors, tonsils should be tested as a matter of course and without question. This category of people tends to regard a sore throat only exceptionally as an illness. In our experience, a tonsillotomy is never able to eliminate a tonsillar interference field but, on the contrary, is more likely to produce one. Tonsillectomy scars so often become interference fields that it would seem justifiable to formulate the following condition: no chronically ill patient who has had a tonsillectomy is to be discharged after treatment before his or her tonsillectomy scars have been tested by an injection of procaine to check whether they might constitute an interference field, even if the patient's previous history does not point in that direction. In this context, the patient's age, the length of time that he or she has suffered from his or her complaint, and the scientific name and description of his or her illness are all irrelevant.

Obviously, the same also applies to adenoids. Their removal also leaves a scar that can produce a disturbance somewhere else. The region of the adenoids is of importance in the light of their connection with the pharyngeal hypophysis and the anterior lobe of the pituitary; this link is due not only to its embryological development but is also given by the geographical location of the organs concerned. Obviously, it can and should be tested accordingly, particularly if the patient is a mouth-breather or has a high-arched palate.

According to Sollmann, the right tonsil (or tonsillectomy scar) is found to act as an interference field in a surprisingly large number of cases of chronic polyarthritis and disorders of the joints on the right side of the body: shoulder (humeroscapular periarthritis), rheumatic torticollis, epicondylitis, finger/toe and metatarsal joints, central and lower vertebral column (Scheuermann disease, rheumatoid or ankylosing spondylitis, postural defects), hip joint, knee joint, sacroiliac pain. In addition, it is also said to produce diseases of the palm (eczema, Dupuytren's contracture), of the thymus gland, the gallbladder region, and around the umbilicus.

The left tonsil or the scar resulting from surgery, on the other hand, is liable to affect the joints on the left side, including shoulder, knee, epicondyle, fingers, metatarsals, toes, wrist and palm; also the heart, both kidneys, and suprarenale. According to Sollmann, many forms of hypertension are also attributable to the left tonsil or its scar.

Such observations are useful and deserve to be investigated further and supplemented. However, I doubt whether they can lead to the discovery of a "craniocaudal regulating system." There cannot be any doubt, however, that the above list is not an exhaustive repertory of all the possible areas on which the tonsils can act as an interference field. In my view, at least two factors must combine for an illness to result from an interference field. First, the escalation of diseased tissue to the stage of becoming an active interference field and, second, an organ or organ system that has been previously damaged by hereditary or acquired factors to make it more susceptible to the action of an interference field. Since the formation of an interference field and the organ disturbed by it will always vary from one case to another, a very large number of combinations and permutations become possible. Sollmann himself merely wanted to draw attention to the possible links, not to establish a new dogma.

Adler's reminder should be taken in the same spirit when he points out that where the tonsils act as an interference field, this is always accompanied by a number of pressure-sensitive hyperalgetic points in the cervical spine, from the fourth cervical vertebra down to the upper edge of the trapezius muscle, approximately four to five finger's breadth superior to the acromion. We know that the trapezius tends also to be larded with fibrositic nodules when there is an interference field present in the thoracic and abdominal regions. Whether these have any connection with the tonsils can easily be checked by means of a test injection. All fibrositic nodules in the connective tissue of the segment melt like butter in the sun when we induce a lightning reaction. When we examine a patient, we should therefore always try to palpate this area in order to discover whether there are any of these present, to observe their behavior after such a test injection, and to record our findings. This is the only way in which we can produce some sort of order in a diagnostic system based on such correlations (Fig. 1.**20**).

Where the tonsils prove to be acting as an interference field, we still do not generally consider tonsillectomy to be indicated, only with reservations, on an individual case-by-case assessment and as a last resort. We do not share the old focal teaching, according to which, by removing the diseased tonsils, we are able to

extirpate a bacterial swamp that has been causing damage by spreading bacteria and toxins. We see our task rather in reversing a change that may have occurred in the basic autonomic system, produced by the tonsils via the nerves. In our view, tonsillectomy is an irreversible intervention close to the sympathetic chain, involving an important organ with a filtering and protective function.

Our injection is a bloodless intervention in the same region of the sympathetic chain, but which has the advantage that it can be repeated at any time with, at the very least, the same prospects of success. In the overwhelming majority of cases, in fact, we succeed in suppressing the interference field produced by the tonsils, by repeating the injections as often as necessary to eliminate with lasting effect all remote disturbances due to tonsillogenic causes. If, on occasion, the effect of our conservative efforts does not increase satisfactorily, we can still fall back on surgery. Vischer stated that:

> most of the customary indications for tonsillectomy or adenectomy do not stand up to critical analysis. There are only very few situations where an adenectomy and, even more rarely, a tonsillectomy can help. Since these situations occur only very infrequently compared with the frequency with which this type of surgery is undertaken, we must ask ourselves whether there may not be nonmedical motives which lead to such surgery.

If after mature consideration we do, occasionally, recommend tonsillectomy, we must in any event arrange for full and thorough dental treatment to be carried out beforehand. In many cases, this will be enough in itself to allow the irritation of the tonsillar tissue to subside and the interference-field effect to be extinguished. If tonsillectomy was carried out without such prior treatment of the teeth, the resulting surgical scars would not heal properly in a throat that is chronically irritated (via the lymphatic system). But even worse, the pathogenic disturbances produced by teeth and jaws can negate all our efforts, both before and after surgery. To allow these to remain active would in all probability turn the tonsillectomy scars into interference-field scars.

To prevent this from happening, we arrange for the patient to come to us after they have had their operation, in order to clear the fresh scars of interference by giving procaine injections two or three times at weekly intervals. In other words, we act prophylactically to prevent further illness from being caused at some remote site by the tonsillar scars. Speransky has shown that any surgical operation may act as a trigger factor that can enable a latent illness to manifest itself, and Huneke has taught us that we can erase these potentially disastrous blows from the stimulus memory, which probably also has its site in the neurovegetative system. The technique for injections to tonsils and adenoids is given in Part III.

Case History 3: Mrs. E. W., Innkeeper, Aged 40

Since the age of 12, Mrs. E. W. had suffered from primary chronic polyarthritis, which progressed slowly but inexorably despite several spells in hospital for treatment, annual visits to health spas for rheumatic diseases, and constant treatment by injections, tablets, embrocations, and massage. She was no longer able to stand for any length of time and could walk only short distances; the joints of hands, fingers, knees, and feet were swollen, deformed, and stiffened, hindering her in work of any kind.

From the patient's history she had had diphtheria as a child, one tonsillar abscess, followed by tonsillectomy. Huneke phenomenon occurred after injection into tonsillar scars. Four weeks later, a further treatment became necessary. Since that time, over 10 years ago, she has experienced complete freedom from pain and a "feeling of well-being she had not known previously." The partially stiffened joints have all but regained their normal shape and mobility without further treatment. The self-healing powers that had been blocked knew in masterly fashion how to restore the disturbed "principle of form."

The Dental Interference Field: Teeth

When one hears that the teeth together with the paranasal sinuses and tonsils form the most frequently encountered interference fields, one is bound to pay a great deal more attention to this important area in future. A dentist's certificate stating that the teeth need not be regarded as a "focus" because the radiographic studies showed no granuloma to be present, or to reach the same conclusion on the strength of a simple visual inspection, are unsatisfactory and worthless! Radiography alone does not verify a focus or an interference field. The only safe method is an additional test (see below on Test and Provocation Methods).

The neural therapist's difficulty in assessing the mouth and teeth begins with his or her need to rely on information that must normally be provided by a dentist. Unfortunately, most dentists have not yet recognized the changes that have to be regarded as possible causes for illnesses due to an interference field. It is therefore worthwhile for the non-dentist to occupy him or herself sufficiently intensively with this complex field, which is so important in the morbid processes that concern us, that he or she will become largely independent of the dentist's judgment and capable of making the necessary decisions on his or her own.

The case history usually fails us with regard to the teeth. Speransky discovered that interference fields

that originate in the dental area have a delayed onset (without external symptoms). It is unlikely that a patient will report dental work as the noxious trigger factor, because, after some time has past between treatment and onset, he or she does not see the causal relationship or even consider a root canal a surgical procedure.

In order to be able to do this, we need a full set of radiographic studies of the jaws. These should be made for the full extent of the jaws, regardless of whether teeth are present or not. First, this will largely provide an answer for us as to the presence of any devitalized teeth. If any filling material can be seen in the pulp or root canals, then the tooth is devitalized. The same applies to heavily carious teeth, pivot teeth, and discolored teeth. Discoloration results from the decomposition of protein within the tooth. Often, the shadows cast by a metal crown covering a filling make it impossible to judge this. It is therefore always advisable to include such teeth in the list of suspects. A tooth can become devitalized simply by grinding, or by thermal, chemical, or traumatic stimuli, without necessarily having had root-canal treatment. In order to clarify this, we need to ask the dentist to carry out a vitality test, or to do such a test ourselves by means of a suitable instrument (e.g., Testator). But the dentist can also find indications for an odontogenous swelling of the subcutaneous connective tissue and for focal infections of the tonsils by thoroughly examining the oral cavity and palpating the cheeks and the area inferior to the temporomandibular articulation.

Many dentists still hold to the outdated idea that only an apical granuloma visible on a radiograph will "disseminate," more or less according to its size, and produce remote disease only via the bloodstream, and that a devitalized tooth without periapical abnormality must similarly be innocent. But this attitude is wrong. Dentine contains protein, which, after a tooth has become devitalized, is subject to decay. The products of decay, such as mercaptan, can produce neural irritation. Dentine is traversed by fine parallel canaliculi in which all the elements of interstitial connective tissue are present: autonomic terminal fibers, and capillary and lymphatic vessels. According to Pischinger, all inflammatory reactions occur in this ubiquitous basic tissue, including the formation of interference fields. A "devitalized" tooth is thus still linked to the rest of the organism via its interconnections from the interior of the tooth, by its dentine and cement, at least as regards the metabolic processes. Biologically speaking, therefore, a "dead" tooth is not dead at all, nor is it an isolated foreign body. If it were, it would be rejected as a bony sequestrum.

For us, chronically inflamed dental pulp is suspect as a possible interference field, all the more so any necrotic or gangrenous pulp. At this point, radiography and clinical investigations can desert us completely. Even a vitality test can mislead, since moist gangrenous pulp may produce a positive reaction to a flow of stimuli. Chronic pulpitis may occur with advanced caries, in badly placed silicate or plastic fillings with inadequate lining to protect the pulp, as a result of corrosive material used in dental care, and also by overheating if a tooth is inexpertly ground. It can also occur because of trauma, of an internal granuloma, where there are deep alveolar pockets, and via the bloodstream in the train of general diseases such as diphtheria or septicemia. Many a failure in dental treatment can be laid at the door of these inflammatory conditions in the dental pulp, clinical diagnosis of which is extremely difficult. Nevertheless, they act on the basic regulating system as a continual additional stress factor (Pischinger).

A granuloma is a terminal condition of a chronic inflammatory process and, as such, already acts as a secondary focus. The primary focus in the root canal cannot be seen on a radiographic study. Long before the granuloma is formed, this primary focus may become an active interference field by the interconnecting canaliculi referred to above. Changes in the radiograph occur only when tooth and jaw have already been diseased for some time. The electrical skin test and thermography (see Test and Provocation Methods below) can tell us something about the location of a focus or interference field well before any radiograph. A granuloma is merely the product of defensive measures taken by the organism as its reaction to the inflammatory materials produced by the decomposition of intradental proteins. It tells us only that the tooth is devitalized, but nothing as to whether it is now acting as a disseminating focus. There are some teeth with granulomas that cannot be shown to be doing any damage anywhere in the body for the time being, because for the moment they represent only an inactive and potential interference field in an organism in good defensive condition.

Human teeth can produce a bite pressure of up to 80 kg. The thought that each time the teeth are champed together toxins are squeezed out of the bacterial granuloma to give the carrier a minute injection of poison with every bite is somewhat disquieting. No conscientious dental surgeon will ever leave a granuloma in situ; he or she will remove it because he or she knows that these sealed-off foci and temporarily quiescent interference fields are like ticking time bombs ready to explode at any moment when the body's defenses are lowered by internal or external stresses. In the case of a devitalized tooth without a granuloma, however, he or she hesitates to adopt the same reasoning process. Yet the dentist ought to know that a rarefying osteitis need not necessarily show on radiography but can still be more dangerous to a patient's health than the sealed-off granuloma encapsulated in connective tissue. He or

she seems literally to cling to every single tooth. Many dentists are still most reluctant to extract devitalized teeth. When shall we at last reach the point when recognition of this will extend to the "conservative root-canal treatment," which so often opens the way for other disease processes? The bacteriologist, Gins, once wrote that "conservative dentistry still aspires to safeguard the dental disease and not the healthy teeth."

Unfortunately, teeth with apical granulomas and devitalized teeth do not exhaust this subject. Remote neural disturbances can also be caused by inflammatory changes near the roots of teeth, which barely show on radiographs, by osteomyelitic foci, by displaced teeth, by teeth used as buttresses for bridgework and therefore subjected to excessive stress, and by radicular, paradental, or follicular cysts. In cysts there is a constant decomposition of protein. This, together with the tendency of cysts to grow, is a sufficient reason for their removal, and the same applies to odontomas, conglomerates of dental tissue, hypercementoses and all sclerosing processes in the mandibular or maxillary bones. Gingivitis, stomatitis, and parodontoses also interest us in this context. Pathological alveolar and gingival pockets, particularly those producing secretion, also deserve attention as sources of chronic irritation, as do any inflammatory conditions around dental crowns or projecting fillings. Even a stomatitis that occurred years ago and left no visible changes can have left behind a latent interference field that may become active at a later date by some second insult (trigger factor) to the system.

Residual osteitis deserves special mention in this connection (i.e., alveolar osteitis, primary chronic osteomyelitis). The importance of this condition in any search for an interference field is becoming increasingly recognized. Formerly, the patient's defensive capability was still intact enough to enable the gums generally to heal by themselves after a dental extraction. Nowadays, environmental and internal pollution seems to have reduced this defensive capability. This state is made worse through the routine use of prophylactic antibiotics. This is one of the contributory factors to the present situation, where about half of all patients suffer from some form of residual osteitis, a condition extremely difficult to diagnose and that can easily become a new interference field.

These are persistent chronic inflammatory conditions in the maxillary and mandibular bones, which can occur after the extraction of devitalized teeth or around apical residues or foreign bodies (e.g., bits of amalgam). Also, the arsenic that is used for the devitalization of the dental pulp can reach neighboring bones where it may cause necrosis (Case History 6). The identification of residual osteitis and its evaluation by radiography is not always easy and calls for a certain amount of experience. However, it has been demonstrated that one-third of residual osteitis that was ultimately histologically confirmed could not be diagnosed on the radiograph. The changes are not sharply defined and can generally be recognized only by their blurred bony structure. The overlying mucosa may show livid discoloration and the bone may be sensitive to pressure. If the residual osteitis is on the surface of the bone, it is possible to penetrate into the soft bone underneath with the point of the needle used for the local anesthetic. In such cases, surgery becomes indispensable. A large area of bone is exposed and the mushy necrotic tissue is curetted away down to the healthy bone. This process often proves to be far more extensive than the radiographic studies had given cause to suspect. Hopfer found residual osteitis in more than a quarter of all his patients. A large percentage of these caused remote disturbances. Sollmann drew attention to sclerosing changes in the retromolar space, which can produce a similar interference-field effect.

The Spanish stomatologist, Adler, drew my attention to the fateful part that can be played in the context of interference fields not only by impacted but also by untreated "healthy" wisdom teeth. With advancing age, there tends to be a physiological alveolar atrophy. Teeth grow from the crown toward the root and do not shrink with the jaws. In the lower jaw they move ever closer to the ascending branch and often exert pressure (i.e., an irritation) on the mandibular canal. Almost all wisdom teeth, especially those that are out of alignment, have deep marginal pockets from which a chronic bacterial and inflammatory irritation goes out to the tonsils and the cervical lymphatic glands. In his view, these teeth become interference fields so often that a more appropriate name for them would be "teeth of misfortune" rather than "wisdom teeth" (Case History 24, Part II). Adler removes these neurally and bacterially disturbing teeth, always with excellent results. In his experience, they are especially liable to produce irritations of the cervical spine (→ cervical syndrome). But they are also the cause of many other disorders, including "emotional crises." According to Adler, in the presence of interference fields in the maxillary region, there are always typical painful pressure-sensitive points beside the lateral processes of the second cervical vertebra. Palpation of these will indicate the side of the upper jaw that is involved, but without at the same time also telling us which tooth is concerned. Mandibular interference fields produce pressure-sensitive points near the lateral processes of the third cervical vertebra. These "Adler's points" are very useful for a first approximate orientation (Fig. 1.**20**).

Different metals placed in a solution are known to produce galvanic current. Yet, how many teeth are treated conservatively without regard to the fact that various types of metals are sometimes used (gold, silver amalgam, steel, etc.), in order to "preserve" them skillfully?

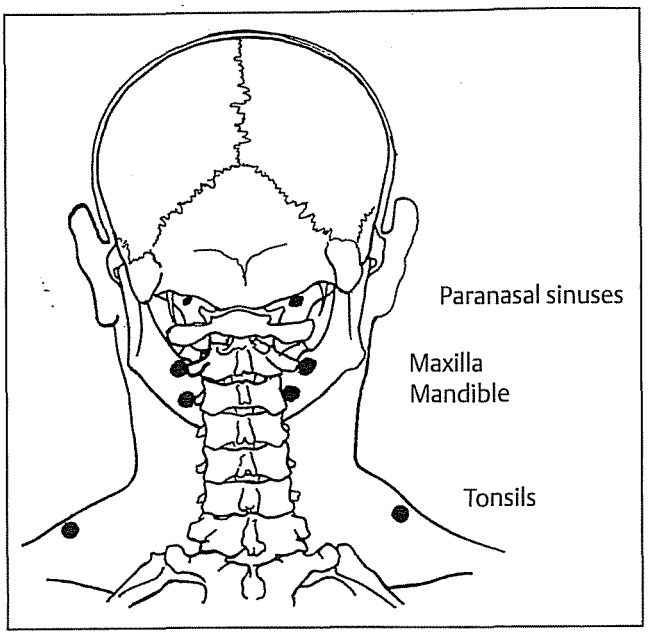


Fig. 1.20 **Pressure-sensitive hyperalgetic points.** *Source:* Adler E. Allgemein-Erkrankungen durch Stoerfelder (Trigeminus-Bereich) (General disorders due to interference fields [trigeminal area]). 3rd revised and expanded (German) ed. Heidelberg: Verlag für Medizin Dr Ewald Fischer; 1977.

If we take into account that the current produced in such cases can reach 800 mV and more and can thus be considerably greater than that used for an ECG (1–2 mV) or an EEG (5–50 µV), the obvious conclusion is that such non-biological exogenous energy, which the organism is unable to metabolize, can produce interference and act as a source of illness in anyone with the appropriate predisposition. This flow of current in the mouth or the exceeding of tolerable amounts can be detected with measuring devices (more in Test and Provocation Methods). In addition, the flow of current can also produce electrolysis of toxic mercury ions in amalgam fillings. Further, in root-canal treatment, in fillings, crowns, and grafts in the jawbone, different types of metallic and non-metallic substances are used. Over the years, these may act as "depot antigens" (Altmann). Metals and metal alloys often suffer from corrosion, when the free metallic ions can produce allergic reactions at remote sites. Even when modern plastics are used, there can be no certainty that there will be no allergizing side-effects. Even minute quantities can produce serious consequences. Unfortunately, even jaw implants are potential interference fields caused by foreign substances.

In children, devitalized and unerupted deciduous teeth can play as important a part (e. g., in lack of appetite, asthma, eczema etc.) as the permanent teeth. Irregularities in the position of the teeth, especially the narrowing of the interdental spaces, are also significant. They, like any other unphysiological condition, can lead to remote disturbances. Early orthodontic treatment thus not only has a cosmetic effect but also a prophylactic value.

In this context, Stacher described the following case. A specialist in internal medicine always suffered severe attacks of trigeminal neuralgia after consuming small quantities of alcohol. These attacks were taken as evidence of an alcohol allergy. They disappeared when, in accordance with the recommendations made by a neural therapist, the wrong bite of an otherwise unsuspect dental crown was corrected, although this advice was accepted with skepticism and reluctance by the dentist. This cure proved that, in this case, the irritation of the jaw due to structural stresses was alone responsible for the profound reversal in the patient's reactive state.

Amongst the abnormal states and foreign bodies we must also include bone grafts and the like. Obviously, these can also acquire the character of interference fields. Even an edentulous alveolar margin is no guarantee that it will not harbor an interference field. Apart from residual osteitis, remnants of roots, and foreign bodies, the scars left by extractions can themselves create interference fields. Hence, we do not advocate excessive dental clearance as this was, for a time, standard practice in the United States. We must always bear in mind that excessive dental treatment may hold the risk of acting as a trigger factor. Dental treatment should therefore be carried out only after due consideration and calls for conscientious and skillful execution.

We favor purposive, selective treatment, i.e., we test the suspect points and treat them after we have obtained a Huneke phenomenon. If only single teeth are involved, it is not in itself difficult to identify the troublemakers. However, it is important to know that all devitalized and diseased teeth, complete with their supporting structure, can act as a single interference field. For this reason, all suspect teeth must always be tested in a single session. It is preferable to examine one healthy tooth too many than overlook a possible interference field. However many devitalized teeth or teeth with apical granulomas or merely suspect teeth there might be, all of them—even if they amount to more than half a mouthful—must be tested by injection, one after the other, even if the patient does feel a little groggy afterward. The end, in this case, justifies such a sacrifice. It is a sacrifice the patient will be glad enough to make if their physician makes it clear to them that it may be crucial to recovering their health.

An assessment of the teeth and their supporting structure is often extremely difficult, so that we have to depend on good cooperation with an experienced dentist. However, this should be someone with an open mind with regard to this type of problem, someone who knows what we need to know from him or her and who will be prepared to discuss with us the further procedure in the patient's interest, on the basis of radiographs, the electrical focus test, and the vitality test.

We may speak of a dental lightning reaction only if all the symptoms have disappeared completely after the test, if this state continues for at least 8 hours, and if the duration of the improvement obtained previously is exceeded on repeating the treatment. The Huneke dental test fails in about 30–50 % of all patients. When dental treatment is then carried out despite such a negative test result, the disorder still disappears. However, to disqualify the dental test by neural-therapeutic preparations on this account as uncertain is to go too far. Compared with the failure rate, its usefulness is still very great. If we use syringes for the intraligamental anesthesia of the → (T) teeth, the failure rate is considerably lowered. Because the dental test can fail us, especially where we are dealing with displaced teeth, we advise patients, when both segmental therapy and all tests have failed, to have dental treatment in accordance with our stringent requirements. This has repeatedly produced cures that were previously impossible to achieve.

Any resident physician at a spa resort requires his or her patients to have their teeth put in order before starting their cure, for he or she knows from experience how often a dental focus can nullify such a cure. The relief provided to the neurovegetative system by such comprehensive treatment can be enough in itself to produce a cure. Where it does not, it may be worthwhile starting neural therapy again after a recovery phase of a few weeks to several months, once dental treatment has been completed and after all regulation-blocking agents (e. g., cortisone, phenylbutazone etc.) have been discontinued. Often enough, the organism only now becomes capable of reacting to our injections. Incidentally, the same also applies when the normal intestinal flora is restored.

What should now be done with any teeth identified as troublemakers? Where the syndrome is potentially serious, as, for example, with an angina pectoris or a polyarthritis, all diseased teeth should be removed. In such cases, the best procedure is extraction followed by clearance of any apical osteitic focus. Whilst apical resection conserves the teeth, it cannot offer any certainty that the gingival and bone scars will not maintain a state of irritation capable of producing remote effects. The resected tooth does, of course, continue to communicate directly with the rest of the organism via its own interstitial connective tissue and by means of the interconnecting canaliculi via the cement, and can thus continue to interfere with the normal functioning of the organism. In minor disorders and in the case of important teeth used for buttressing bridgework, etc., it may be worth trying to reduce and ultimately eliminate the neural interference field by repeated injections, similar to the procedure described for the tonsillar interference field. Here, too, the effect should continue for a longer period after each repetition of the treatment, until a full cure has been achieved. Otherwise, extraction is preferable.

In Khalakh, the royal city between Nineveh and Assur, clay tablets with cuneiform writing have been found of correspondence between the Assyrian king Asarhaddon (680 BC–669 BC) and his physician Aradna. The king, suffering from polyarthritis, describes his symptoms to the royal physician as follows: "I am consumed by a fever that burns in my bones." The other clearly knew something of the interference-field effect of diseased teeth and prescribed, over 2500 years ago, the rigorous procedure to be followed by his royal master: "He whose head, hands, and feet are inflamed owes his illness to the bad state of his teeth. My Lord's teeth must be removed, for through them he is inflamed within. The pains will then disappear at once and his condition will again be satisfactory." There it is, in a nutshell!

As already stated, we do not favor wholesale dental extractions. On the other hand, the efforts that are sometimes made by dentists to conserve as many teeth as possible by root-canal treatment, especially when they are intended to act as buttresses for bridgework, are unjustifiable from an immunological, toxico-allergic, and neural point of view, because by their "conservation" they are setting up foci and interference fields, which result in damage to their patients' health totally disproportionate to the presumed advantages. Dental surgeons should also, therefore, think more globally, in holistic medical terms, rather than simply seeing their purpose in life to be to conserve as many teeth as possible. In the end, it is always the patient who pays the price with his or her health. From our point of view, a patient with false teeth is luckier than one who has a glass eye, an artificial leg, a colostomy, a hearing aid, or who needs crutches.

We must always bear in mind that three-quarters of all chronic sinusitis has an odontogenic origin and may turn into interference fields, and that in such cases the lymph supply can, as a secondary or tertiary effect, cause the function of overtaxed tonsils to become blocked or the tonsils themselves to turn into interference fields. We simply have to leave aside our customary way of thinking, which places the organ in the center of the stage, and learn to think and act more cybernetically, never losing sight of the whole. Any dentist treating a patient with a dental abscess or filling a root canal ought to be left in no doubt that they are thereby assuming a grave responsibility for their patient's health, and that with every intervention they are making a decision that will affect the patient's future. If in doubt in such cases, he or she must always decide in favor of the patient and against the tooth.

The dental surgeon's importance with regard to the pathological processes taking place in the organism is not that of a "narrow-gauge physician." Instead, he or she can be an invaluable ally. Such a partnership de-

mands genuine collaboration between him or her and the neural therapist, on the basis of full equality, which will always prove worthwhile to him or her, to us, and not least to the patient.

Dental statistics on focal and interference-field processes in the odonto-alveolar region speak for themselves: Mayer found that out of a total of 2362 patients, 97.6 % suffered from focal disturbances, averaging six disturbance factors per patient. Schuh obtained similar figures with 77.3 %, Raab with 87.2 % and Froehlich with 94.3 %. At Giessen University, Rost examined 2000 patients; 75.6 % had foci. Of 3000 patients at a sanatorium, 68.5 % had dental foci, despite the fact that all of them had brought the requisite certificate on entry to state that they had received comprehensive dental treatment.

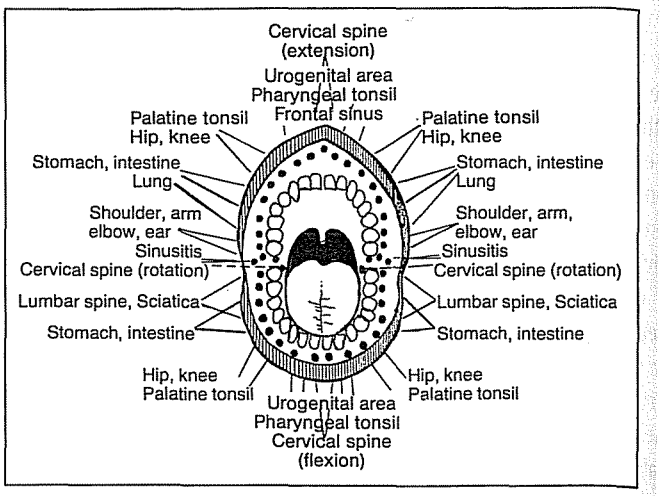


Fig. 1.**21** Specific reaction points on the oral mucosa (according to Gleditsch).

Summary of Possible Odontogenic Foci and Interference Fields

- vital teeth with decreased vitality or root absorptions;
- vital teeth with chronic pulpitis or gangrene of the pulp (protein breakdown products);
- all devitalized teeth with completely or incompletely filled root-canal, damage due to root-canal filling material;
- teeth with various forms of parodontopathies, such as gingivitis, periodontal pockets etc.;
- tilted teeth, impacted teeth (particularly in the area of the wisdom teeth);
- retained or partially retained teeth in the jawbone (dentitio difficilis); also displaced teeth;
- teeth with apical or inter-radicular changes, such as osteitis, periapical foci, granuloma etc.;
- teeth with interdental osteolysis due to insufficiently compacted fillings or crown margins;
- displaced or fractured teeth;
- sclerosing or osteolytic residual osteitis;
- foreign body inclusions, submucously or in the spongy substance of the bone (for example, exstirpation needles, amalgam, cement etc., retrograde amalgam fillings, root remains), and all implants;
- apicoectomy or relapse after apicoectomy;
- osteitis around root of deciduous tooth, remains of deciduous tooth, tooth germs;
- radicular or/and follicular cysts;
- jaw fractures, bone and soft tissue lesions, fistulas;
- interference currents due to the use of different metals (amalgam, gold, metal implant material); threshold up to 100 millivolt and 2 nanoampere;
- odontogenic maxillary sinusitis, chronically inflamed tonsils.

The International Society for Electro-acupuncture in Germany has published a table by Voll and Kramer on "Odonto-stomato-alveolar conditions and their energy relationships to the rest of the organism." This is reproduced as Table 1.**2**.

Gleditsch has drawn attention to pressure-sensitive hyperalgetic reaction points on the oral mucosa (see Fig. 1.**21**), which can cause functional disturbances in joints and organs. These are found near the teeth, mainly in the vestibule of the mouth, in the upper and lower lip, and the buccal mucosa, about a finger's breadth labially of the alveolar sulcus. In the case of the premolars, these points lie closer to the sulcus and closer still in the case of the molars. They correspond very largely with the interrelationships between individual odontones and certain of the body's organs and functions, as stated by Voll and Kramer. According to these, the upper and lower jaw left and right correspond with the body's homolateral upper and lower quadrants.

Mere inspection of the mucosa may provide valuable pointers. If gentle palpation with the fingertip shows any part of the mucosa (which is then often edematous) to be obviously sensitive to pressure, the circumscribed point should be located by tapping the area with the point of a fine needle. When the reaction point is touched, the patient feels a kind of electric twinge and shows this by pulling a face. The patient should now be asked to half-close the mouth. Using a fine (size 18 or 20) needle, inject the mucosa superficially and tangentially with 0.25–0.5 mL of 0.5 % procaine solution (diluted with physiological saline solution but without additives) to form a → (T) quaddle. Then massage gently to distribute the product more evenly. If on further palpation after the injection the point has not become insensitive, further points in this area should be accurately located and treated. Remote disturbances having their origin in the oral mucosa rarely disappear at once, but generally do so progressively over a period of time. Initial aggravation is also

Table 2.1 The teeth and their relations to the rest of the organs

SENSE ORGANS	Inner ear		Maxillary sinus		Ethmoid cells	Eye	Frontal sinus		Frontal sinus	Eye		Ethmoid cells		Maxillary sinus		Inner ear	
JOINTS	Shoulder Elbow		Jaws		Shoulder Elbow	Back of knee			Back of knee			Shoulder Elbow		Jaws		Shoulder Elbow	
						Hip	Sacrococcyx		Sacrococcyx	Hip							
	Hand ulnar Foot plantar Toes, sacro-iliac joint		Front of knee		Hand radial Foot Big toe	Foot			Foot			Hand radial Foot Big toe		Front of knee		Hand ulnar Foot plantar Toes, sacro-iliac joint	
SPINAL SEGMENTS	C8 T1 T5 T6 T7 S1 S2 S3		T11 T12 L1		C5 C6 C7 T2 T3 T4 L4 L5	T8 T9 T10	L2 L3 S4 S5 Coccyx		L2 L3 S4 S5 Coccyx	T8 T9 T10		C5 C6 C7 T2 T3 T4 L4 L5		T11 T12 L1		C8 T1 T5 T6 T7 S1 S2 S3	
VERTEBRAE	C7 T1 T5 T6 S1 S2		T11 T12 L1		C5 C6 C7 T3 T4 L4 L5	T9 T10	L2 L3 S3 S4 S5 Coccyx		L2 L3 S3 S4 S5 Coccyx	T9 T10		C5 C6 C7 T3 T4 L4 L5		T11 T12 L1		C7 T1 T5 T6 S1 S2	
ORGANS	Heart rt		Pancreas		Lung rt	Liver rt	Kidney rt		Kidney lt	Liver lt		Lung lt		Spleen		Heart lt	
	Duodenum		Stomach rt		Large intestine rt	Gall-bladder	Bladder rt Urogenital area		Bladder lt Urogenital area	Bile ducts lt		Large intestine lt		Stomach lt		Jejunum Ileum lt	
ENDOCRINE GLANDS	Ant. lobe of pituitary		Para-thyroid	Thyroid	Thymus	Post. lobe of pituitary		Pineal gland	Pineal gland	Post. lobe of pituitary		Thymus	Thyroid	Para-thyroid		Ant. lobe of pituitary	
OTHERS	CNS Psyche		Mammary gland rt											Mammary gland lt		CNS Psyche	
	R																L
	Tooth	8	7	6	5 (V)	4 (IV)	3 (III)	2 (II)	1 (I)	1 (I)	2 (II)	3 (III)	4 (IV)	5 (V)	6	7	8	Tooth
	R																L
OTHERS	Energy metabolism				Mammary gland rt								Mammary gland lt				Energy metabolism
ENDOCRINE GLDS TISSUE SYSTEMS	Peripheral nerves		Ar-teries	Veins	Lymph vessels	Gonad		Suprarenal gld	Suprarenal gld	Gonad		Lymph vessels	Veins	Ar-teries		Peripheral nervous system	
ORGANS	Ileum rt Ileocoecal region		Large intestine rt		Stomach rt Pylorus	Gall-bladder	Bladder rt Urogenital area		Bladder lt Urogenital area	Bile ducts lt		Stomach lt		Large intestine lt		Jejunum Ileum lt	
	Heart rt		Lung rt		Pancreas	Liver rt	Kidney rt		Kidney lt	Liver lt		Spleen		Lung lt		Heart lt	
VERTEBRAE	C7 T1 T5 T6 S1 S2		C5 C6 C7 T3 T4 L4 L5		T11 T12 L1	T9 T10	L2 L3 S3 S4 S5 Coccyx		L2 L3 S3 S4 S5 Coccyx	T9 T10		T11 T12 L1		C5 C6 C7 T3 T4 L4 L5		C7 T1 T5 T6 S1 S2	
SPINAL SEGMENTS	C8 T1 T5 T6 T7 S1 S2 S3		C5 C6 C7 T2 T3 T4 L4 L5		T11 T12 L1	T8 T9 T10	L2 L3 S4 S5 Coccyx		L2 L3 S4 S5 Coccyx	T8 T9 T10		T11 T12 L1		C5 C6 C7 T2 T3 T4 L4 L5		C8 T1 T5 T6 T7 S1 S2 S3	
JOINTS	Shoulder and elbow				Front of knee	Back of knee			Back of knee			Front of knee		Shoulder and elbow			
	Hand ulnar Foot plantar Toes, sacro-iliac joint		Hand radial Foot Big toe			Hip	Sacrococcyx		Sacrococcyx	Hip				Hand radial Foot Big toe		Hand ulnar Foot plantar Toes, sacro-iliac joint	
					Jaws	Foot			Foot			Jaws					
SENSE ORGANS	Ear		Ethmoid cells		Maxillary sinus	Eye	Frontal sinus		Frontal sinus	Eye		Maxillary sinus		Ethmoid cells		Ear	

possible here and should be interpreted as the onset of an exacerbated counter-regulation effect. Very occasionally, dental foci may suddenly flare up as a result of this treatment and indicate dental treatment.

The incisors and the points on the mucosa in front of them are related to the urogenital area, the pharyngeal tonsils and frontal sinuses. The canines and the points on the mucosa in front of them are related to the hip and knee joints and the palatine tonsils. The premolars and molars and their respective mucosal points are related to the digestive and respiratory systems. The wisdom teeth and the retromolar area lying distally of them in the maxilla are related to the ears, shoulders, arms, and elbows. The points around the → (T) maxillary tuberosity are especially effective, also in cases of digestive disorders and acute or chronic sinusitis. The wisdom teeth and the retromolar area in the mandible are related to the vertebral column, buccally to the thoracic and lumbar spine (lumbago, sciatica), lingually to the cervical spine (rotation dysfunctions). In the midline of the upper and lower jaws there are further points for the cervical spine: on the frenulum of the maxilla these relate to extension and on the mandible to flexion of the head.

To sum up: inspection of the mucous membranes in the oral maxillo-facial area, manual palpation of the alveolar processes, surrounding gingival, and subcutis, of scars from dental extraction and surgery in the oral cavity, and radiographic examination of the teeth with vitality diagnosis done by a qualified dentist must be the starting point for any neural-therapeutic treatment. The dentist should remove any residual roots and den-

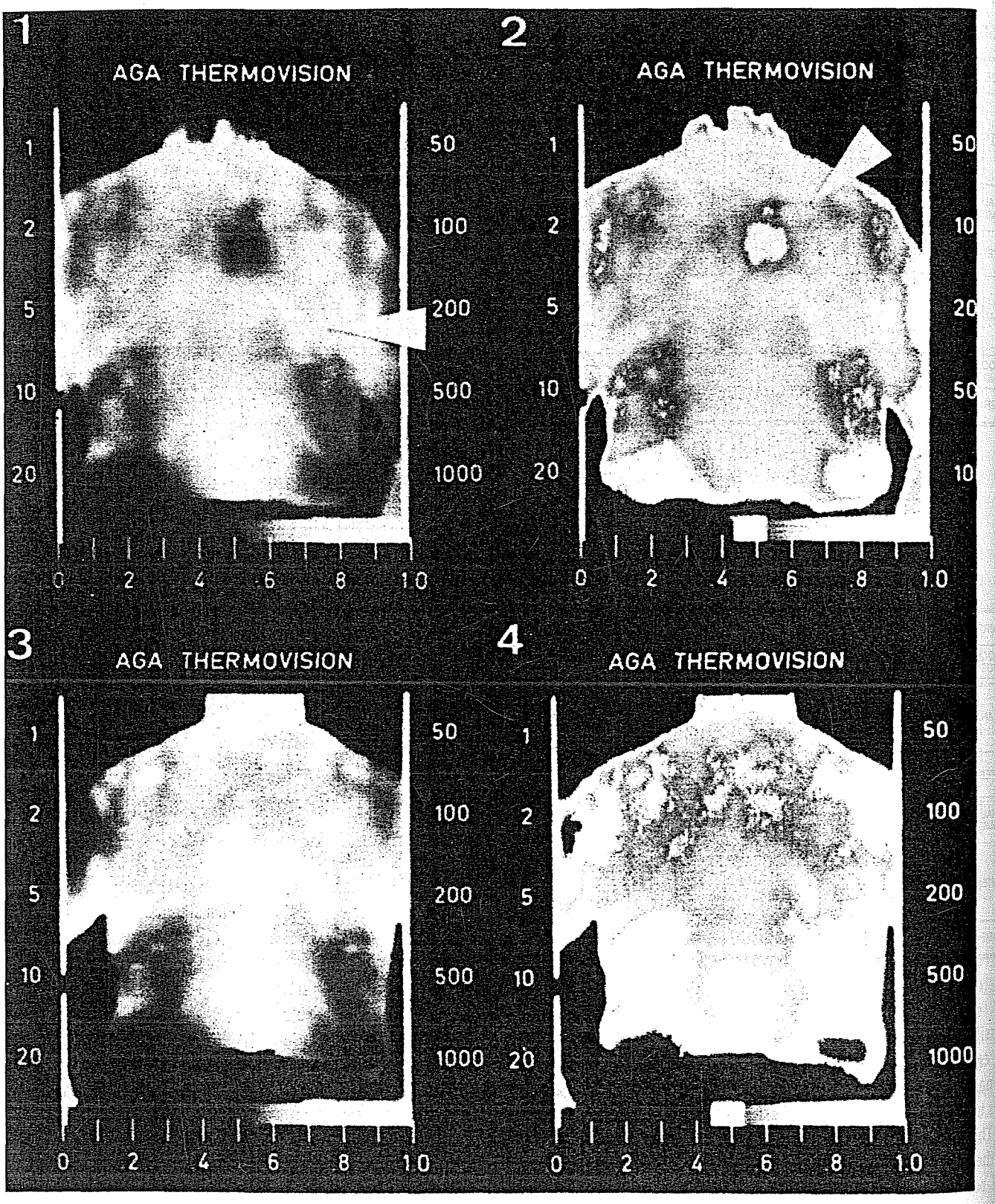


Fig. 1.22 **Objective thermovisual evidence of a Huneke phenomenon.** These four pictures show the back of a 50-year-old woman with interscapular symptoms.

1. (Gray-tone photograph.) Hyperalgetic area due to low temperature (ischemia) shows up as a dark patch. Raised temperature in gallbladder area (arrow).

2. Lowest isotherm (arrow) marks hyperalgetic area.

3 and 4. Gray-tone and isotherm pictures following procaine injections to a cholecystectomy drainage scar and a scar on the patient's right temple resulting from injury at 4 years of age (interference fields). These injections gave immediate freedom from pain. Hence there is no further evidence of pathognomic temperature differences.

tal granulomas without needing to be told to do so. All possible interference fields that might still remain in the dental region should then be tested by electrical and other provocation methods, although this is generally left to the end of our efforts (see p. 118). If these tests produce a Huneke phenomenon (see Figure 1.**22**), patient and dentist will be easy to win over to thorough dental treatment. If our treatment, including dental testing, is unsuccessful, and if the patient is seriously ill, complete dental treatment must be carried out. As already stated, this also applies where tests have proved negative. For whilst active toxic processes are continuing in the mandibular region, any therapy other than complete dental treatment is useless.

In this context it can be well worthwhile discussing premedication and all pharmaceutical or chemotherapeutic measures with the dentist beforehand. An attempt should always be made to avoid antibiotics or chemotherapy as regulation-blocking agents. If it is not possible to discontinue these measures, Elpimed should be given before, during, and after the treatment to limit the regulation-inhibiting effects. In addition, anti allergies and calcium injections are indicated. Biological preparations (e. g., Cefasept, Echinacin, Exberitox, Traumeel) should be used as substitutes, as far and as long as such a course can be reasonably justified. About 4 weeks after completing treatment, once the wounds have healed and a prosthesis has been fitted, the family doctor will have to begin post-operative treatment lasting about 3 months, to desensitize the organism and increase its defensive capacity. This will help to reduce the organism's regulatory paralysis and is essential to make it more responsive to renewed attempts at neural-therapeutic treatment. If we then try our luck again, we must not forget the new dental scars.

Case History 4: Mrs. L. K., Aged 46

This patient had been suffering for years from arthrosis of a knee, with moderate symptoms, with sudden flare-up of "rheumatic" arthritis of the knee, causing it to swell within a few hours and to become so painful that she could no longer climb the stairs to go to bed. No substantial improvement following segmental therapy (quaddles around the joint). On being questioned, she stated that an upper canine tooth, used for attaching a somewhat shaky prosthesis, hurt occasionally. An injection to this overtaxed but otherwise (except for a small pocket in the mucosa) completely unsuspect tooth immediately relieved the pain in the knee. Within a very short time she was again able to climb the stairs. Two days later, without further treatment or special care, the knee had become normal again, all swelling gone. On four separate occasions during the next 3 years, the tooth had to be treated again when the knee became swollen and painful. Each time, there was the same lightning reaction. The disorder did not threaten the patient's life and since it was so easy to keep the process under control, it was decided to have the pocket treated by the dentist and to leave the tooth in position as a pillar to support the denture.

The Ears as an Interference Field

As already stated, most regulation-inhibiting interference fields are to be found in the region of the head. Apart from the triad comprising teeth, paranasal sinuses, and tonsils, which interact, we must not neglect the ears as an interference field. Sixty-three percent of all human beings suffer from otitis media in their first year of life. Hence the ears as interference field will not always be mentioned by a patient when one is taking his or her history. A useful pointer is the state of the skin behind the ears, which in these cases is generally hard and not easy to move. Whether the ear is acting as pathological focus for a remote disorder after an earlier or still florid otitis media (or externa) can be readily determined by a perfectly simple test injection.

We first set a procaine quaddle over the → (T) mastoid process. Through this we then inject 0.5 mL of procaine down to the periosteum of the mastoid. Radical surgery of the middle ear often leaves a deep scar. This should always be tested! One simply needs to set a few superficial, i.e., strictly intradermal quaddles placed carefully in the scar. Deeper injections of greater quantities can cause unpleasant rotary vertigo, and in such cases it is preferable to give additional injections around the tightly stretched scar.

Case History 5: Mr. R. F., Engineer, Aged 51

Mr. R. F. experienced very severe "neurodystonia" with "neurovegetative crises" and attacks of paresthesia in both arms and legs, accompanied by such severe disturbances to his circulation and equilibrium that during these attacks he could no longer stand or walk unaided. He would become pale, vomit, suffer from acute anxiety, with sweating and a fine digital tremor, but curiously enough without tinnitus. Psychotherapy, neurological in-patient treatment on several occasions, stays in sanatoria and spas, the constant administration of strong sedatives and incompetent "neural therapy," which included a series of no fewer than 25 "blocking" injections into the stellate ganglion and a great deal more, proved totally useless. The failure of orthodox medicine now excelled itself by labeling him a psychopath and neurotic.

On each occasion when a single quaddle was set over the middle of a deep and tender mastoidectomy scar, all symptoms disappeared instantly. His facial expression relaxed, normal circulation was restored and the paresthesia disappeared. This injection was at first necessary every few days, then, after a few weeks, at ever-

increasing intervals. He now comes for treatment when he has an attack, about once in 4 or 5 months, whenever he has been under mental or physical stress.
The effect of this treatment will continue to increase until he is completely cured. Without it, this man would long ago have become totally unfit for work. Any other treatment would fail in this particular case, since it would not deal with the cause of his disorder, the interference field in the ear. Instead of the old diagnosis "functional disorder of the autonomic nervous system" offered for want of something better, his complaint has now been diagnosed correctly as being a "circulatory and sensory disorder due to the interference field in the ear."

A word also needs to be said about the series of injections to the stellate ganglion. Used purely segmentally, these were certainly indicated. But they were clearly unable to develop the same effect on the interference field in the ear as the injection directly into the surgical scar. In neural therapy we are guided by the following rule. If an injection into the segment does not produce any substantial improvement or if an injection into a suspected interference field does not produce a lightning reaction, which fulfills the stipulated conditions, all further injections to this site are pointless and cannot succeed!

Nose: the Paranasal Sinuses, the Ethmoid Bone, and the Nasal Reflex Zones as Interference Fields

The submucous tissue of the lower and middle conchae is particularly richly innervated. Using a nasal speculum, it is possible to reach and infiltrate this tissue and the terminal nerve fibers from the middle branch of the trigeminal nerve with a long, thin needle. In this branch, parasympathetic fibers of the pterygopalatine ganglion and sympathetic fibers of the superior cervical ganglion run to the mucous membrane of the paranasal sinuses. The lower autonomic fibers of the trigeminal nerve, which relay pain and temperature information, reach as far as the medulla oblongata and its important relay centers for the heart, respiration, and vasomotor functions, while the upper fibers extend to the midbrain, which is extremely important to us as the center regulating the entire neurovegetative system. The relevance of the nose and of all foci in the head to every imaginable autononomic disorder will thus be obvious. The nasal reflex zones have often been the subject of argument, and the last word has probably not yet been heard on these. A critical assessment of the areas that have so far been defined is still outstanding. But there can be little doubt that this still largely unexplored territory deserves further observation and study. Based on his observations on the sensation of pain, Fliess stated the hypothesis that part of the evolutionary segmental structure of the human body is reflected in the mucous membrane of the nose. He assumed two pain-conduction channels from a diseased organ to the brain:

- from the irritated nerves of the organ directly to the brain;
- via the related spinal segment to a kind of relay station in the nose.

According to this theory, "neuralgic" changes are produced there in response to the stimulus he believed he saw in certain hyperalgetic points or cyanotic discoloration and swellings with an increased hemorrhagic tendency. He discovered these in the lower conchae, the tubercle of the nasal septum, and the anterior part of the left middle concha. He considered that Head's zones are developed only secondarily from these irritated sites in the nose, by way of the spinal segments, which correspond to these nasal sites in embryological and evolutionary terms, i.e., reflex hyperalgesia of the skin is produced in the areas supplied by sensory fibers emanating from the same spinal segment as the diseased organ. He believed that he had proved the higher relay function of the nose in the formation of Head's zones by the interesting observation that it is possible to eliminate referred pain in Head's zones, for example, in cholecystitis or appendicitis, by anesthesia of the "neuralgic" changes in the nasal mucosa. Conversely, primary disorders of the nasal mucosa may also produce remote pains in the subordinate Head's zones of the body, without the corresponding organ being diseased. In Fliess's view, these pains can also be relieved by anesthesia of the nasal mucosa.

There seems to be conclusive evidence of a reciprocal effect between the nose and the genital region. This may be tested in the case of dysmenorrhea. Mechanical dysmenorrhea tends to disappear when menstrual bleeding begins. If the pain continues, the disorder may be due to nasal causes, which can be stopped by means of a → (T) nasal spray or anesthesia with a pledget of cottonwool moistened with a mucous-membrane anesthetic such as a 2 % Pantocaine solution. The attendant abdominal pains can be eliminated by anesthesia of the lower concha, and the lumbar pain by anesthesia of the tuberculum septi. Formerly, these points were cauterized to obtain a permanent cure. But since we know that any new scar can become an interference field, we prefer to avoid surgery that will produce a scar, except reluctantly as a last resort, especially as practical experience has taught us that repeated pinpoint anesthetics will also produce a cure.

The Frenchman, Leprince, determined four mucosal fields with the following relationships to organic zones:

a. an urogenital zone, in the anterior third of the lower concha;

b. a solar plexus zone, in the middle portion of the lower concha;
c. a cervical zone, in the posterior third of the lower concha;
d. a pulmonary zone, in the anterior portion of the middle concha (see Fig. 3.**46**).

We agree that the type and strength of the stimulus and the site where it is applied can also be of importance in this context. Nevertheless, we rarely treat these areas as such. We regard it as adequate to try to obtain a response from the nasal mucosa as a whole by using a 2% Pantocaine (amethocaine) solution as a nasal spray. The normal reflex response of the organism and especially of the hormonal system to this simple measure is remarkable: the blood-sugar level rises, there is a considerable excretion of adrenalin and 17-ketosteroids, and a drop in eosinophil leucocytes!

Sollmann thought that he had observed a frequently recurring relationship between the paranasal sinuses as an interference field and a large number of disorders. In his view, the right maxillary sinus is intimately related to all allergic skin disorders, such as a tendency to eczema, urticaria, and pruritus, and thyrotoxicosis and stabbing pain radiating from the back as far as the sternum. The left maxillary sinus is said to be responsible for allergic disorders of the mucous membranes: bronchial asthma, chronic bronchitis, hay fever, and a tendency to inflammation of other mucosa, such as meningitis, peritonitis, orchitis, and glaucoma. It is also said to favor the formation of varicose veins in the left leg. Sollmann also considered the frontal sinus responsible for frontal headaches and for disorders of the urinary bladder. According to Adler, when there is an interference field in the upper nasal region and the paranasal sinuses, diagnostically useful pressure-sensitive pain points can always be found at the lower occipital margin (see Fig. 1.**20**). With regard to diagnosis and therapy, the paranasal sinuses are the least accessible of all interference fields. Injections to the pterygopalatine ganglion and the maxillary tuberosity are described in Part III (Techniques).

In the case of foci in the frontal and ethmoid sinuses, we often find the exit point of the supraorbital nerve to be pressure-sensitive. An injection to this point or to the periosteum of the root of the nose can initiate a curative response in the sinuses underneath and may thus reveal what the relevant relationships are.

The exit point of the right supraorbital nerve also has intimate connections with the liver and gallbladder. Ratschow was able to confirm that it is a hyperalgetic point in a third of all gallbladder disorders and that a procaine injection there will immediately and reliably stop colic and all the usual attendant symptoms.

The exit points of the infraorbital nerve should also be palpated to the right and to the left, and tests applied if these are found to be pressure-sensitive. Such treatment is often followed by a sudden, severe catarrh, which thoroughly clears the sinuses. In other cases, we may have to depend on working together with an otorhinolaryngologist who, based on the information provided by radiography, may often obtain even better results by irrigation followed by the instillation of a local anesthetic (for example, lidocaine). If we hear that the patient has had an operation on the maxillary sinus, we must, as a matter of course, infiltrate the scar in the mucous membrane of the maxilla and then inject through the scar to the periosteum of the maxillary sinus, since there is a callus at this point.

Three-quarters of all disorders of the maxillary sinuses are directly related to diseased teeth. Endoscopy can show the root apex of the upper molars reaching into the base of the maxillary sinuses where they cause and maintain chronic inflammations. Via the lymphatic system, this can continuously encumber and aggravate the tonsils. Proper treatment of the teeth is thus an essential precondition for curing sinus disorders. The elimination of an interference field located in the sinuses can take a long time and may require a number of injections to the periosteum. If the radiograph shows empyema with polypous degeneration of the mucous membrane, we shall naturally refer the patient to a specialist to assist us in our treatment.

Case History 6: Self-observation

In 1944, my dentist at the time placed an arsenic filling in the third right upper tooth (canine), which was to be removed the next day. However, due to the exigencies of war, this could be done only 3 weeks later. Then, in attempting an apicectomy, he broke through into the decayed maxillary sinus. Part of the base of the maxillary sinus came away with the extracted tooth. A fistula remained between buccal cavity and maxillary sinus, which closed only slowly and formed a granuloma. A year later, there was acute sinusitis with rigors and high fever. Then, for 4 years, there were no further symptoms. In 1949 I first had hepatitis, but did not rest. This was followed by a new attack of sinusitis, treated by about 40 irrigations and finally by surgery. In the following years, mainly right-sided headaches developed, accompanied by right supraorbital neuralgia, which eventually evolved into severe migraine attacks. Procaine was injected into the right antecubital vein and under the scalp, but without effect. After a few injections into the pressure-sensitive right supraorbital nerve, the neuralgia and migraine attacks disappeared. This nerve now makes its presence known only the day after excessive alcohol intake, indicating that the detoxicating liver is still under stress. But it can be quickly quietened, and with it also my guilt complex, as soon as it gets a shot of procaine. The same symptoms also occur following a cold and after physical or mental

strain. This proves to me that a hyperalgetic point on the periphery can be irritated by a remote organ at a much lower point in the body, the liver, when I have a cold, or by the central nervous system as a result of stress, and that it sends out its signals when the regulating mechanisms are overloaded.

Thirty years after the arsenic filling, like a bolt from the blue, I suddenly suffered a detached retina in my right eye. The Eye Hospital at the Munich University Clinic was able to save my eye. But no explanation could be found that could be reasonably regarded as the cause. No one wanted to accept my old story about the eye tooth. But in this case I really think that I know better!

Scars as Interference Fields

After tonsils and teeth, scars figure as the next most common interference fields. Any scar, no matter how insignificant, even if it dates back to earliest childhood, whether healed by first or second intention, can in later life become the cause of a therapy-resistant and potentially fatal angina pectoris, severe rheumatoid arthritis, disk lesions, hearing loss, glaucoma, sciatica, asthma, or other serious disorders of almost any kind. Thus, a scar said to be "non-irritating" can clearly act as a substantial neural irritant. But why one scar but not another should in such a case turn into an interference field still remains a mystery. At first sight it does not seem to make sense that a small scar should be capable of producing such far-reaching changes. Due to impaired wound healing and its effects on the regulation mechanisms of the organism, the organism is unable to recreate homogenous normal resistance in interference field scars. Electrical resistances can be rebalanced after neural-therapeutic injection treatment of the scar. This leads to the assumption that regulation-inhibiting blocks can be removed as well.

On measuring electrical resistance in interference-field scars, Stacher found that they had an abnormally high resistance compared with normal skin, in some cases as much as 10 times as high. According to Schoeler, any scar tissue has a far higher resistance than adjacent, undamaged skin tissue. If the electrical resistance found in a scar is the same as that of the normal environment or lower, then this is an abnormal condition for a scar, in exactly the same way as would be the case if abnormally high resistance like that described by Stacher were found in normal skin. Scars and pathologically altered skin areas that show a substantially higher or lower resistance than normal skin must be suspect as likely interference fields and are important in neural therapy as points of departure for our form of treatment. Any gross deviation beyond the normal range of 40–150 KΩ (kiloohms) is therefore of fundamental importance.

Kellner and Pischinger have shown how small causes can have enormous effects. Kellner's histological studies suggest that, in particular, scars that have not healed normally are likely to become interference fields. The same also applies to granulomas that form around foreign bodies, such as those that form around the talc crystals from powdered surgical gloves. Giant cells surround the insoluble silicate crystals and form lymphocytic and plasmacellular infiltrates. By what means such microscopically small foreign bodies may cause disease in the comparatively large human being has been demonstrated by Pischinger. According to him, the constant stress produced by these crystals, which the body is incapable of breaking down, provokes changes in the basic system, which can impede and paralyze the entire regulating system and have serious consequences.

As regards metallic foreign bodies, the rule applies that the use of these in the body should be avoided as far as possible, since any such metal part can produce an indirect electrolytic disturbance and generate electric currents.

In our search for an interference field, all scars in the region of the head must first of all be found and eliminated as suspects. The search should then be continued conscientiously for old injuries, wounds, and surgical scars of all kinds, preferably with the patient stripped completely. Any painful, itchy, tender, or occasionally inflamed scars and any chronically altered skin areas, scars that are sensitive to changes in the weather, tight scars that cannot be displaced easily or adhere to the bone, are particularly suspect as potential interference fields.

Scars are normally insensitive. There is a rough preliminary mechanical test that allows us to find altered and hence suspect scars more easily: if a scar is tender or painful when touched with a needle, pinched between the fingernails or kneaded and rolled between thumb and forefinger, the sensitive part of the scar should be regarded as suspect and must be injected. This saves the patient unnecessary injections into neutral scars. However, modern measuring methods for testing scars are substantially more reliable (see Test and Provocation Methods). Even perfectly asymptomatic scars from carbuncles in the neck, scars from occasional wounds to hands, knees, and feet, or due to perineal tears, scars resulting from cervical lacerations in labor, vaginal tears, pierced ears that have suppurated, pressure-sensitive areas found in hallux valgus, even painful corns; all these must be taken seriously. Particularly in small children, the human being's first scar, the umbilicus, should not be forgotten. The same also applies to smallpox-vaccination and BCG-inoculation scars (Case History 29 in Part II). In this examination the doctor's eyes are more important than what the patient tells him or her, for the latter may even for-

get an amputated toe, rib resections, plastic-surgery scars, and large injection abscesses. The patient's fate may turn on a single scar!

For this purpose, the term "scar" should be taken in its widest possible sense. Cures obtained by the Huneke phenomenon have proved that even the bony union after an uncomplicated fracture, and of course all the more so after a compound fracture, are scars within the meaning of interference-field formation. In cases of doubt, radiographs must help us to find the correct site for our injection.

A patient suffering from rheumatism was found to have had a double fracture of the ankle. A test injection into the scar and through the scar down to the bone produced only about 80% improvement. The residual complaint disappeared only when I injected the periosteum of the old fracture site on the opposite side of the ankle.

An infiltrate that remains in the gluteus muscle after an intramuscular injection is also a scar. Old fractures, torn ligaments, contusions, and lacerated muscles can take on the guise of an interference field even when there is no visible external scar; it may, however, still be palpable! Dupuytren's contracture is a scar formation due to chronic irritation and has proved to be an interference field on a number of occasions. Residues of thrombophlebitis are also scars as far as we are concerned. Brown or purple pigmentation of the leg following chronic infection (varicose ulcer, ecthyma) must also be investigated by test injections, in order to ascertain whether it indicates any pathogenic action. Let this also be a reminder that scars following tonsillectomy, dental extractions, and surgery on the maxillary sinuses and the middle ear, must also be included in this category. Vaccination scars may also form interference fields, but do so relatively rarely. In the case of faciai scars (Schmiss) received by dueling fraternity members, those with bone and artery involvement need to be examined carefully.

Acupuncturists have drawn attention to the fact that scars lying on acupuncture points or channels tend to cause remote disturbances in the organs related to these points and lines. I merely mention this; further evidence would be welcome. In neural therapy we must be particularly careful to avoid generalizing and deducing biological laws from single observations. In the case of amputations of fingers and toes, for example, I have been unable to confirm this statement. The following are the organs or channels belonging to them that ought to be disturbed if the digit concerned is missing:

- thumb: lung;
- big toe: pancreas, liver;
- forefinger: large intestine;
- second toe: stomach;
- middle finger: circulation;
- ring finger: endocrine system;
- fourth toe: gallbladder;
- little finger: small intestine, heart;
- small toe: kidney, bladder.

But this applies only occasionally. We shall be better advised to regard each patient as a unique case, capable of turning all the empirical rules upside down.

Obviously, metal splinters in the body can also produce disturbances. A male patient suffering from a gastric ulcer produced a lightning reaction for me from a shrapnel scar in the arm. Repetition of the injection down to the bone in which the splinter was embedded did not increase the result satisfactorily. The injections had to be repeated far too often. This changed instantly when the surgeon, at my request, chiseled the shell splinter out of the radius. After prophylactic post-operative treatment of the fresh surgical scar, the patient's stomach has now left him in peace for over 9 years, although he no longer keeps to a diet. We find time after time that neural therapy is still very much an unexplored territory. Each case is new and different; there is no standard pattern that will fit every time.

The possibilities for the formation of interference fields that scars of all kinds provide are enormous. All of them must be eliminated. Since it seems that, by analogy with the teeth, several or even all existing scars may combine to act as a single interference field, they must all be injected in a single session.

In his book *The Treatment of Internal Disorders* (*Behandlung innerer Krankheiten*), F. Hoff writes:

> I particularly want to confirm, as Nonnenbruch and Gross have also pointed out, that old scars that failed to heal well years ago can act as interference fields. So, for example, we have seen patients who, for many months and with all the means available to cardiology, had been under treatment for severe anginal attacks or cardiac rhythm disturbances, or others with "rheumatic disorders" of the shoulder joint with severely limited movement, became completely symptom-free after an injection of Impletol into old scars, such as those following rib resection for thoracic empyema or after gunshot injuries to the buttock, even following skin or other soft-tissue injuries of a leg, and who then remained symptom-free after repetition of this simple treatment.

Case History 7: Mr. F. K., Retired, Aged 62

Mr. F. K. suffered from hypertrophic arthritis of the hip joint, with extensive destruction of the joint, including substantial bony changes, together with bilateral arthrosis of the knees. The patient's history indicated a large number of possible interference fields. After segmental therapy with 2 mL of procaine to the periosteum of the trochanter major and five intracutaneous quaddles to each knee had produced no substantial improvement, I started to look for an interference field. After I

had injected the scar of a deep paronychia, the patient reported that he had remained completely free from pain for 1 day on his left side and for 4 days on the right. A second and third treatment of this scar produced no better results. Huneke's rule that a lightning reaction may be claimed only if the effect of the treatment increases on repetition could not therefore be satisfied. But the result obtained did suggest that one or more additional scars apart from that tested on the patient's hand might between them act as an interference field.

So the search had to continue! I asked the patient to undress completely and examined him from top to toe. Vaccination scars, minute scars from old furuncles, even old shaving nicks in the skin were all tested, without success. I then found a 3 cm-long thick scar on the sole of his right foot, which he had completely forgotten, since he had had it since childhood. This man had already had to suffer a large number of injections during this surgery session. It would therefore be absurd to assume that those into his foot scar that now followed should have had a greater suggestive effect than all the preceding ones. But he responded spontaneously: "It's strange, but suddenly it's all gone, I feel so much better." At last we had obtained a genuine lightning reaction! Although the partial bony ankylosis of the hip remained and the radiographic picture was obviously no better than it had been, he was now free from pain, he could lie in bed and turn over without waking up with pain. The previously progressive morbid processes were stopped and may regress. If the pain should recur, an injection into the two scars on finger and foot will be all that is needed, and the effect will increase until no further injections are necessary, because the interference field will have been extinguished and the remote disturbance cured to the extent still anatomically possible.

We learn from this case that when injections into scars do produce an improvement, but one that does not satisfy all the conditions for a Huneke phenomenon, we must continue our search for other scars that could be acting jointly with any already treated to form a single interference field. The following is another instructive case.

Case History 8: Mr. W. U., Employee, Aged 55

The patient had for many years suffered from gallbladder disease and chronic constipation, and had made the round of all the doctors. He also discontinued neural therapy, because the first few treatment sessions did not yield any immediate results. He eventually accepted specialist advice and underwent surgery. The gallbladder was removed and inflammatory adhesions excised. Shortly after the operation, while he was still in hospital, he suffered new attacks of colic. Strangely enough, these were now stated to be either psychogenic or due to adhesions.

He returned to me and begged for further procaine treatment. In the course of further test injections, I found a small, hardly visible lentil-sized scar on his leg, surrounded by a palm-sized discolored area. A purulent wound he had had as a prisoner of war had left this scar. This was injected and produced a lightning reaction. Now, more than 12 years later, he has had no recurrence of his complaint, he eats whatever he wants and his stools are regular. He is again totally fit for work and no longer haunts all the medical specialists. With hindsight it is obvious that the major operation to which he submitted was not indicated, since in his case the pathogenic cause was not in the gallbladder at all but in the leg. It is a fact that 30–40 % of all patients who undergo gallbladder surgery have relapses, and for the same basic reason. For surgery at the site of a functional defect is useless if the interference responsible for the defect is located somewhere totally different. The neural-therapeutic diagnosis in this case is cholecystopathy and "postcholecystectomy syndrome," remote interference caused by a scar located at the lower leg.

How widely we need to interpret the meaning of "scar" is illustrated by a particularly interesting case that appeared in a report in the *Munich Medical Weekly* (*Münchener Medizinische Wochenschrift*) 1956;44, recounted in the case history that follows.

Case History 9: Dr. H. S., Veterinary Surgeon, Aged 31

When the patient was brought to me, he had been suffering for 2 years from flaccid paralysis of both legs, at first in the form of attacks and then permanently. During his attacks, there was no reflex response. Full investigations and treatment were carried out at two university hospitals, but without producing any change. In the end, he was discharged as incurable and abandoned to his fate with a diagnosis of paroxysmal hereditary paralysis.

His history showed that he had suffered from a sore throat on numerous occasions, had once had tonsillitis, and that there were over 20 shell splinters in both legs. It also provided the information that paralysis had first occurred about a week after he had accidentally pricked his finger with an infected hypodermic needle. Specialist opinion had stated with papal infallibility that such an everyday injury for a veterinary surgeon could not possibly have been the cause of his paralysis. Consequently, his health insurance had finally rejected his claim for compensation on account of an injury sustained in the course of his work.

I did not know anything about the disease that was given as the diagnosis, but my friend and mentor Huneke had taught me that any chronic condition could be due to an interference field. A test injection into the

chronically inflamed tonsils produced nothing. But a few drops of procaine into the injured fingertip, in which no macroscopic change was discernible, were enough to make the paralysis vanish completely and permanently within a few minutes of the injection. His wife, a physiotherapist, had been giving him daily treatment with such dedication that his muscles had not become completely atrophied. Had he failed to mention this pinprick with the hypodermic, he would without any doubt have remained chained to his wheelchair for the rest of his life. However, in the event, he has been back at work without relapse since 1956.

After being cured, he presented himself again at the specialist's who had produced the diagnosis that he was suffering from this obscure disease. The specialist asked him what he had done to cure his "incurable" disease. The veterinary surgeon told him about my successful procaine injection with its surprise result. The specialist's reply deserves to be quoted: "What, procaine? We could have done that, too!" Without a doubt, but they did not. That is, of course, the difference between potential skills and actually making use of them. Since we cannot treat genuine hereditary disease, the only possible explanation in this case is that of a disorder produced by an interference field, which presented with the symptoms of a hereditary disease but which was not hereditary at all.

After his personal experience, it is hardly surprising that this veterinary surgeon should want to see whether this new therapeutic principle could also be used with animals. He has meanwhile published details of a number of segmental cures and lightning reactions that he has achieved in animals. Amongst these, two are perhaps of special interest here.

An Alsatian dog was lame on one hind leg. He had received a large number of different injections in the past, all to no avail. Yet, after a procaine injection into a head scar, this dog was able to jump down from the operating table. The second case was of a horse that had been unable to feed for 6 days because of pharyngeal paralysis. This animal was cured instantly when Dr. S. injected procaine into the scar of an esophageal fistula. On account of its inability to feed, the horse had been practically at the end of its strength. Now, it ate hungrily.

Kothbauer has reported how a therapy-resistant mastitis in a cow was also cured instantly when he injected procaine into a palm-sized scar in the pelvic area caused by barbed wire. Another case of obstinate indigestion, which had persisted for several days with febrile attacks, disappeared instantly after procaine treatment of a patently tender cesarian scar. Digestive disturbances in another cow were cured within hours after he had injected procaine to eliminate the interference-field effect of a painful scar left by the surgical removal of a foreign body. Such cures must surely convince even the most obstinate skeptics that the curative effect in a Huneke phenomenon is connected not with psychological but with organic processes, and that the frequently repeated objection that it is based on suggestion cannot be upheld any longer. In animals there is no such thing as suggestion as we know it in the human being!

The case of Dr. S. shows us that truly any point in the body, even a mere pinprick, can become an interference field. The many injections that we have to administer in neural therapy do not turn into interference fields, because any interference that we might cause is immediately extinguished by the procaine injection that follows. If we remember in this connection that a serum rash can be stopped by anesthetizing the entry point where the serum has been injected (Muschaweck), and when we learn that the best treatment for snakebite is to inject procaine around the fresh bite, new and interesting relationships are opened to us with regard to allergic and toxic reactions that occur under the direction of the nervous system.

Amputation Scars as Interference Fields

A separate section is devoted to amputation scars, since their importance as a pathogenic cause is all too often underestimated. From what has already been stated in the last section, it will be obvious that even a superficial scar may become an interference field. But after the amputation of a limb, we have at a single site scars in skin, bone, vessels, and nerves. The neuroglia on the nerve stump itself produces trophic and vasomotor disturbances and creates interference stimuli that can produce not only pain but also every kind of regulatory disturbance. For example, it is common knowledge that patients who have had a leg amputated above the knee tend to be subject to gastric ulcers, cardiac disorders, indigestion, sweating, obesity, hypertension, plethora, and other autonomic and hormonal disorders, to an extent well above average. But how many physicians are there who will draw the obvious conclusions from this knowledge and look for an interference field there as the cause?

We test the limb-amputation site as follows. First loosen the scar by injecting a small quantity of air under the surface. Procaine is then injected with the needle left in situ. The small scar at the site of a drain should not be forgotten in this. If the patient tells us that we may put the needle anywhere but into one particular spot, he is drawing our attention to the very point we must inject. When this is being done, it is essential that both the patient and an assistant hold the stump immobile, since any sudden movement by the patient resulting from the painful injection may break the needle. After the pain of the injection has passed off, the amputee will often tell us spontaneously that

he or she suddenly feels much better and that his or her other complaints have also disappeared. If his or her symptoms recur, he or she will usually be perfectly willing to submit again to the same painful procedure.

Amputation sites of fingers and toes should be treated in the same thorough manner. If the patient has an artificial eye, this should be removed, to enable procaine to be injected with a fine needle into the enucleation site. If only a superficial quaddle is set in the mucosa of the scar, this can produce no negative effect. In this way, I have been able to use the lightning reaction to cure a glaucoma that was threatening to affect the other eye, a case of polyarthritis, and, in another patient, a gastric ulcer and deafness simultaneously (→ amputation-stump pains; → causalgia).

Case History 10: Mr. R. T., Master Baker, Aged 39

After his return from a prisoner-of-war camp, the patient started to suffer from such severe baker's asthma with an isolated allergy to rye flour that he seriously considered giving up his trade. Whenever he came into contact with rye flour, he started a vasomotor rhinitis, which would be followed by an attack of asthma. This often developed into bronchopneumonia, which kept him bedridden for weeks at a time. There was hardly an asthma remedy he had not tried. An attempt to treat him by hypnosis was also of no avail.

Segmental therapy with procaine given intravenously and quaddles at the sides of the sternum and the spinal column often help considerably in cases of asthma, if the treatment is repeated several times. In his case, this also failed to produce relief. Test injections to tonsils, teeth, and scars similarly failed to produce a Huneke phenomenon. Some improvement was found to occur after injections into a scar on the right hand where he had lost three fingers during the war, but this was not such as to satisfy the conditions for a lightning reaction, i.e., the asthma did not disappear completely for at least 20 hours after the injection into this scar. But when I administered a deep injection to a sensitive neuroma and to the bone scar, he told me that he felt as though the tight ring around his chest had been released and that he was again able to breathe freely. The next day, he inhaled rye flour in front of my eyes, without suffering any ill effects. Where was his allergy now? This shows that any chronic disorder can be due to an interference field, including asthma and allergies.

A year later, I had to repeat the injection. While on holiday, he had received a blow from a ball in the region of the kidneys. This had caused an attack of hematuria and acted as trigger factor to set off a potentially fatal asthmatic crisis. After being admitted to hospital, the patient begged repeatedly to be given a procaine injection into the finger stump, but this was brusquely swept aside as nonsense. When he became moribund, the hospital required him to sign an indemnity before he was at last discharged. On his return home, I repeated the injection to the finger stump and cured his asthma. Six injections into the abdominal sympathetic chain also got rid of the 0.2 % protein in his urine with which he had been discharged from hospital. Since then, for the last 40 years, he has remained in excellent health.

Liver, Gallbladder, and the Gastric Region as Interference Fields

In the living organism, there are no sharply defined boundaries but only flowing transitions. Liver, gallbladder, stomach, pancreas, and intestine all form a single functional entity. If one of these organs is diseased, sooner or later the others will also become demonstrably affected via viscerovisceral reflex pathways, at first functionally and later organically.

To repeat again: any disorder of the gastrointestinal tract, exactly as any other elsewhere, can be caused at any site somewhere else in the body, such as tonsils, teeth, or a scar (see Case History 8), i.e., it may be a remote disturbance due to an interference field. Conversely, the abdominal segment may also become a primary interference field for other disorders. In the first case, the injections must be given to tonsils, teeth, or scars. In the second, they are administered to the abdominal sympathetic chain and into the epigastrium. If this were commonly known amongst doctors, there would be far more cures and a great many pointless operations could be avoided.

If the patient's history shows that he or she has suffered from a disorder of the liver or gallbladder, particularly hepatitis or recurrent cholecystitis, gastric or duodenal ulcer, pancreatitis, dysentery, cholera, typhoid, colitis, chronic constipation, or chronic diarrhea, this may indicate an interference field in the → abdomen. It is possible to ascertain this by injection into the abdominal sympathetic chain at the level of the upper renal pole (see → (T) [abdominal] sympathetic chain). This injection was first proposed by Vishnevski and has proved to be so useful in segmental treatment of all disorders of the liver, gallbladder, stomach, pancreas, and intestine, for example, in chronic constipation, that it would be difficult to do without it. As stated, this injection also shows whether there is any chronic irritation in this area, even though no local symptoms may be present. If such a state of irritation is found to exist, it may cause a disturbance at some other site that, in that event, will not respond to segmental therapy or other local treatment and may present as arthrosis of the knee, migraine, cardiac or bronchial asthma, psoriasis, or eczema. Every neural therapist knows that the liver plays a far greater part in interference-field processes than orthodox medicine is prepared to concede. We regard the liver not merely as an organ used for detoxification, which stores glycogens and secretes bile.

From the curative phenomena that we can produce from the abdominal sympathetic chain we may conclude that the liver also has an autonomic control function → dystrophy.

The Appendix as Interference Field

A "grumbling" appendix can be a classic interference field and is capable of provoking every conceivable kind of disturbance in the neurovegetative equilibrium. To test it, we set a quaddle over McBurney's point and then pass the needle through this to the region of the peritoneum, slowly infiltrating l– 2 mL of procaine preperitoneally (→ (T) preperitoneal infiltraion) as we go. There is no need to worry if we should happen to perforate the peritoneum. What harm should that do? In fact, in penetrating with the needle we infiltrate all the time. As a result, the vessels, the nerves, and even the intestine move out of its way. Even if we were to perforate the intestine, still nothing would happen, although in practice this is hardly likely if we use a 4 cm needle, with the patient in the supine position. By comparison with an appendectomy or an enterectomy, only minor damage would be caused, which the body can easily cope with.

If a chronic appendicitis is acting as an interference field, all remote disturbances will disappear completely, instantly, and for at least 20 hours after this test. The effect must increase when this injection is repeated. If it fails to do so, as in the case of tonsils and teeth, we should have no choice but to recommend the surgical removal of the chronically altered appendix.

In passing, it is worth remembering that the scar left by appendectomy, especially following a perforated appendix with peritonitis, can continue to act as an interference field long after the diseased appendix has been removed. In taking the patient's history and in making our tests, we must always take into account that the appendix may have acted as an interference field for years before it became acute and had to be removed. In other words, we test an appendectomy scar also if the patient's present disorder began before he or she had his or her appendix removed!

Popular Chinese medicine regards acute appendicitis merely as the partial manifestation of a disorder of the autonomic nervous system or, more precisely, as a disturbance in the energy supply, which does not call for local treatment at all. No surgery is carried out at the site itself. Instead, the local inflammatory symptoms are treated by acupuncture and a plant extract is given orally.

In emergencies (e. g., at sea; with patients refusing surgery; etc.), a number of neural therapists have been able to confirm that the abdominal symptoms rapidly abated following procaine injections over the appendix and as far down as the peritoneum, provided that the process had not advanced too far. The acupuncture point over the head of the right fibula (on the anterior tibial muscle, about 2.5 finger's breadths below the angle between tibia and fibula) will then be found to be pressure-sensitive. A quaddle over this has proved extremely effective. However, in modern medicine this point will doubtless be used more for diagnostic than for therapeutic purposes.

Case History 11: Mr. H. W., Goalkeeper of a National-league Football Team

This patient damaged his lumbar vertebral column during condition training with dumb-bells. The stabbing pain was diagnosed as a "damaged intervertebral disk." The severely restricted movement of the vertebral column made sport of any kind impossible. In accordance with his status as a star sportsman, the patient was passed from one famous clinic to the next. When he was at last told that surgery would be necessary, he came secretly to me because he was afraid that surgery would put an end to his sporting career.

Quaddle treatment in the region of the lumbar spine brought no lasting improvement, nor did intramuscular infiltrations, injections to the vertebrae or to the sympathetic chain at the level of the pain. It was therefore necessary to search for an interference field. When the patient told me that he had had a grumbling appendix since his schooldays, I set two quaddles over McBurney's point and infiltrated through one of these down to the peritoneum. The pain in his back vanished at once and he was again able to move freely in all directions. After having an appendectomy, he again came to me, saying that under extreme stress he was finding about 20 % of the old pain still there. This disappeared for good after procaine treatment of the fresh surgical scar. He is back in his goal and I have often had the pleasure of watching him on television giving a convincing demonstration of his recovery of agility and mobility.

Kretzschmar, an enthusiastic Huneke disciple in the United States, once wrote that he had managed to cure a professor of surgery, of all people, of polyarthritis by means of a lightning reaction, by setting a few quaddles over McBurney's point.

The Pelvic Region as an Interference Field

In women, the pelvic region very often proves to be the site of an interference field. This ought not to surprise us, for there is surely no similar point of least resistance and maximum reaction in the female organism. There can be very few women who have not had to ask for medical help with regard to their lower abdominal region and, regrettably, any woman over 50 who has not had any surgery in the genital area is becoming a

rarity. To the critical observer, the question whether greater restraint with the knife in this admittedly critical area might not be more in accordance with medical ethics still awaits an answer.

It is surely surprising that these highly sensitive pelvic organs do not figure even more frequently than they do as interference fields for chronic disorders elsewhere. Persistent vaginal discharge, abnormal menstruation, abortions (especially if febrile), termination of pregnancy, D&C, difficult labor, puerperal fever, adnexal disease, gonorrhea, or surgery of any kind in connection with the genital organs in the patient's history can all indicate a pathogenic chronic pelvic irritation, even if she no longer has any symptoms and the disorder occurred a long time ago. This also applies if palpation reveals nothing at all. Our methods of examining our patients are far too inaccurate to notice these processes in the living organism. Only a test injection to the pelvic peritoneum can provide an unequivocal answer.

How often do we hear women tell us with surprise, after we have produced a Huneke phenomenon, that they had already been to a whole series of well-known gynecologists who examined them on a number of occasions but had "never found anything?" An interference field cannot be seen nor can the bioelectrical processes be felt. If gynecologists will not learn to include test injections and methods of treatment with procaine in their diagnostic and therapeutic armory, they are bound to do less well than any general practitioner who has learned to examine and treat his or her patients with local anesthetic injections.

The technique of injection into the → (T) pelvic region through the abdominal wall or from the vagina to → (T) Frankenhaeuser's plexus and the → (T) intramural injection into the uterus present only minor difficulties even for the beginner. These injections are easy to learn, they are without risk and are feasible for any woman.

Case History 12: Mrs. E. K., Aged 33

At the age of 23, following her second gallstone colic, her gallbladder containing gallstones was removed (i.e., in accordance with good surgical practice, at an early age and at the beginning of the disorder). She now came to me complaining of a recurrence of her problems, with severe colic attacks.

The patient's history showed hepatitis 16 years earlier, during her first pregnancy; 5 years later, after a miscarriage, her first attack of colic; an operation a year later; now another pregnancy and renewed colics. A connection between the genital organs and the disorders in the hepatocholecystic region seemed to clamor for attention! The procaine injection into the pelvic region promptly eliminated all biliary complaints with their attendant symptoms, also curing her persistent lumbar backache and nocturnal brachial paresthesia. The patient was again able to tolerate fatty foods and no longer needed to take any medicines. The correct diagnosis in this case was "postcholecystectomy syndrome produced by an interference field in the pelvic region."

If we learn in future to analyze the patient's history from such a neural-therapeutic point of view, the only possible site for our injection will often be perfectly obvious from that alone!

Case History 13: Mrs. E. O.

In 1955, this patient was brought to me in severe status asthmaticus. She had had asthma for the first time during her puerperium 9 years earlier. Although she had pointed this out to every physician to whom she had previously been for treatment, she was fobbed off with antiasthmatic drugs by one after the other. Several gynecological examinations by specialists had given her a clean bill of health as regards her reproductive apparatus.

Without telling her what I was doing, I administered a test injection into the pelvic area. She assumed that on this occasion she was merely having one of her customary anti-asthmatics injected under the abdominal wall. Lightning reaction! "What was that? All at once I feel so light. The injection has never before worked so well and so quickly!" Two such treatments of the lower abdomen were all that was needed to make not only her asthma disappear, but also with it a whole series of other disturbances that had been equally therapy-resistant, which had, however, been of only secondary importance compared with her severe asthma: chronic headaches, chronic constipation, dysmenorrhea, insomnia, intolerance of uncooked foods, hypersensitivity of the eyes to bright light, nervous irritability. A single interference field can do so much damage in one person and neural therapy with local anesthetics can help so comprehensively! No wonder that this woman could state that since this treatment she had become a totally different person.

This cure has now been maintained for 35 years. The woman who had been an invalid was able to return to work. She could even work in formaldehyde vapor without having an asthma attack. Only once did the mucous membranes become over-irritated. The injection through the abdominal wall did not suffice on its own to eliminate the consequences completely. But an additional transvaginal injection to Frankenhaeuser's ganglia was able to restore the balance.

One needs to have had personal experience of such a sudden restoration of the neurovegetative equilibrium to be able to believe this, yet each time that one can produce a lightning reaction one is privileged to obtain a new and awe-inspiring glimpse of one of the secrets of life.

Case History 14: Mrs. F. K., Agricultural Worker, Aged 43

For 13 years, this patient had been suffering from severe abdominal pain. This had defied treatment by an almost uncountable number of more or less prominent doctors. Each specialist in turn first took a radiographic picture of her and pumped out her stomach. Since mountains of radiographic studies showed no abnormality, the diagnosis on which they could ultimately agree was that she was suffering from an abdominal neurosis. From that moment onward she merely encountered a shrugging of shoulders and the unsatisfactory and unhelpful statement that it was "only her nerves" playing her up.

I was also tempted to believe in a psychogenic condition, after eight treatments in the segment and tests of all suspect sites had had no effect whatever on her condition. I had not tested the pelvic region, because she was a virgin and had always replied in the negative and with a certain amount of vehemence to all questioning about a vaginal discharge or any previous pelvic disorders. Finally, merely in order to leave no stone unturned, I gave her an injection into the pelvic region. To my surprise, the abdominal symptoms disappeared instantly. Here then was proof that the cause lay in this area. Only now, the woman remembered that some 25 years earlier she had had to stand a whole day long in cold floodwaters to save a threatened wheat harvest. Following this, she had missed her periods for about 6 months and when they returned they did so only gradually and were accompanied by severe pain. This state of irritation in her pelvic region in her youth, as a result of a severe chilling, had remained to cause her, many years later, the abdominal pains from which she had been suffering. The "neurosis" that had been diagnosed was thus capable of being cured only by the elimination of the interference field and not by any other means.

This last case shows clearly how difficult it can be to find the correct site for an injection. The information that enables the practitioner of neural therapy to know where to place his or her injections is unfortunately not supplied with the pharmaceutical preparation he or she uses. Not every failure is to be shown on the debit side of the ledger. If one can accept this, it becomes easy enough to understand why we refuse to publish statistical information on the success rate of individual neural therapists, since these can tell us something only about the person making the report but nothing about the method as such.

The Prostate as an Interference field

The relevance of the prostate in male patients corresponds to that of the pelvis in women. So, for example, it may cause glaucoma, angina pectoris, sciatica, polyarthritis, or hypertrophic arthritis of the hip. The prostate must therefore be examined in this light, especially if there is any history of gonorrhea, orchitis, or difficulties of micturition with or without prostatic adenoma, prostatitis, or chronic unspecific urethritis, any of which suggest a pathogenic focus in this area (→ prostate). Following prostatectomy, the scarred prostatic bed can also turn into an interference field.

Incidentally, hypertrophy of the → prostate and prostatitis can generally be cured without surgery, by weekly injections of 1 mL of procaine into each lobe of the gland, a series of about 10 such injections being required on average. Also, in such cases, it is always quite remarkable to note the extent to which it is possible by this means to reverse premature aging due to pathological causes.

Case History 15: Mr. K. S., Goldsmith, Aged 53

This patient was treated for hypertrophy of the prostate, by injections into the gland. After the third treatment, he volunteered the statement that his vitality and the pleasure he took in his work were now as good as they used to be. Circulatory disturbances of the legs that had caused intermittent claudication had disappeared and he had the impression that his eyesight had improved considerably, as he no longer needed to wear glasses for his work.

Spine: the Vertebral Column as an Interference Field

For us, the vertebral column is not merely a passive supporting structure. In practice, it is also an organ exposed to many of the irritative stimuli that come from the segments, one that can be disturbed by these to a point where it can itself become an interference-field organ. An interference field can so alter the turgor of the connective tissues that they become inelastic. This can impair all the ligaments, tendons, and joint capsules involved. As a result, the function of the vertebral joints and ultimately the dynamic and structural balance of the whole of the vertebral column can be disturbed. Blocked joints may result, which often act as the cause of pseudo-radicular pain symptoms. These pains, in their turn, may secondarily become the point of departure for further regulatory disturbances. Joints are not merely movable connections between bones, but also important control organs. Their receptors show more than only the position of the limbs relative to each other and, when irritated, they do more than merely hurt. Cybernetically, they are linked to the trophic and the muscular motor systems, to the blood supply and so on, and can affect every part of the organism via the segmental spinal reflex control circuits.

In this connection, Bergsmann and Eder refer to the "segmental reflex complex." This term:

> signifies the complete intermeshing of all regulatory processes in the segment and goes beyond the detailed designations of viscerocutaneous or vertebrovisceral reflex mechanism and includes afferent and efferent relationships, and their processing (i.e., including the vertical processing) of information. The vertebral apparatus assumes a position of particular importance in this, especially the cranial joints. The large number of sensory elements in the joint capsules are also of considerable importance, since these act as peripheral proprioceptor control and relay stations. When the function of these joints is disturbed, this may lead to the input of false afferent information to the segmental reflex complex. Together with nociceptor and autonomic impulses, this information is then fed into the posterior-horn complex of the spinal cord and is processed in the form of spinal reflexes. If this complex has been pre-sensitized, with resultant overreaction occurring in the central nervous system as the effect of the diffusion principle, and these reflexes then diffuse further in the anterior-horn complex, the gamma system, the sympathetic nuclei, and, via centripetal pathways, in the centers of the brain, pathomechanisms are formed, which can appear in the form of a variety of clinical symptoms. The resulting large number of possible jumps available to produce an interference source cannot always be clearly perceived. However, clarification should always be tried in form of a selective therapeutic attempt. (Eder)

In the section on scars, attention has already been drawn to the fact that, if necessary, old fractures of every kind should be examined to eliminate them as potential interference fields. Fractures of the vertebrae and the far from uncommon injuries to the transverse and spinous processes are tested by injecting procaine to the periosteum, as close as possible to the site of the fracture. The radiograph protects us against shooting into the unknown.

Even more frequently, we encounter neural interference fields caused by limited mobility of the vertebrae or by their displacement from the normal position. This need not necessarily be due to earlier trauma. We now know that neural dysregulation can come from any point on the periphery or from deeper-lying parts of the organism, and that this can cause secondary circulatory disorders and degenerative processes at remote sites such as the spine, so that pathological changes can occur in the structure of the vertebral apparatus. Old-school chiropractors worked with the concept that every vertebrogenic pain originates in nerve compression at the intervertebral foramen. With jerky repositioning moves, they tried to break the tight foramen open to release the impinged nerve. The compression syndrome accounts only for a small number of cases, mainly radicular sciatica in the lumbar spine in context with a herniated disc. Only in these cases do direct radicular irritation and effects on the sympathetic chain take place. In the thoracic and cervical spine, manual therapists frequently encounter "blockages" and "displacements" of vertebrae. Vertebral joints that have lost their mobility and joint play are considered blocked. They can be compared with a drawer that gets stuck when there is not enough play left for it to move. Vertebrae are considered displaced when they are consistently rotated or tilted within the regular joint play.

The pain that originates in functional disturbances of the vertebral joints is reported to the center via nociceptors, the sensors for adverse stimuli. This produces pseudo-radicular pain, muscle tension, muscular rheumatism, tendomyopathy, myogelosis, vasoconstriction, and even tissue ischemia, activating more nociceptors. This can escalate into a vicious circle of increasing pain. Manual therapists are able to locate the dysfunctional vertebra exactly and restore mobility of the vertebral joints with proper manipulation or correct the incorrect vertebral position. When the regular function is restored, the consequences of the irritation can be removed. This includes pain, disturbances in blood and lymph circulation, tension in the muscular and ligamentous system with all local trophic and transmitted neural disturbances. A genuine lightning reaction is often obtained, even though manual therapists are not in the habit of using this perfectly appropriate term for their often remarkable cures. In our view, in the wider sense of the word, they are also practicing neural therapy.

In the long term, however, their efforts can be only partially successful. If an interference field is causally involved, the vertebra may return to its former abnormal position or the state of neural irritation combined with connective tissue changes persists, in spite of unblocking or repositioning the vertebrae into their proper place. At this point, neural therapy with local anesthesia can successfully complete the process. We break the vicious circle by disabling the pain receptors with intracutaneous quaddles and deeper infiltration to the affected nerves, into the spastic muscle tissue, tendons, ligaments, and the vertebrae and vertebral joints themselves. In this way, the possibility is provided for the reactively contracted muscles to relax and for the strangled blood supply to be released again. The displaced vertebra can return to its original position and the neural cause of the remote disturbance is thus eliminated. Obviously, the earlier we can intervene, the better the chances and the more complete is the cure likely to be.

A combination of chirotherapy and neural therapy according to Huneke is desirable whenever a case proves to be therapy-resistant. So, for example, an injection into the disturbed pelvis, which, in its turn, is also acting as an interference field, can make it possible to manipulate and adjust the cervical vertebrae imme-

diately afterward, although it may have been impossible to do so previously. Our injections into the local segment eliminate pain. In doing so, they relax the muscles so that manipulation is greatly facilitated and, in some cases, is made possible at all. An injection into the sympathetic chain following manipulative repositioning is in many cases essential to make such treatment completely successful. As we know, there is also an osteovisceral reflex system (Vogler, Krauss). We make use of this by injecting a neural-therapeutic preparation close to the richly innervated periosteum, especially when this is sensitive to pressure or tapping. For this reason, some osteopaths inject 0.5–1 mL of procaine near the transverse processes of the atlas, in front of and below the mastoid, if pain persists after manipulation (Lewit).

The vertebral column as a whole can become an interference field if it has previously been damaged as a whole, for example, by Scheuermann disease in youth, by multiple lesions resulting from unphysiological working conditions, by high-performance sporting activity, or by other over-exertion. If there is any suspicion in this regard, paravertebral quaddles should be placed over the transverse processes of all cervical, thoracic, and lumbar vertebrae, and a little procaine should be injected to each. It is best to do this in several sessions, at intervals of about 3 or 4 days, treating six or seven vertebrae at a time and overlapping by a couple of vertebrae from one session to the next. In other words, the last two vertebrae injected during the previous session should again be injected on the next occasion.

A word, too, about the all too readily offered and fashionable diagnosis of "spondylosis and prolapsed intervertebral disk." Nowadays, even simple muscular lumbago tends to be given this official label. The question is surely justified whether there is such a thing as a "normal" radiograph of the vertebral column for anyone over the age of 40. Surely any observer can introduce an element of mystery into this momentary record of the living organism. He or she usually does so in more than full measure. We estimate that only a very small percentage of people going about with what has been diagnosed as a "slipped disk" genuinely present with a "prolapsed intervertebral disk." In this case as in many others, the physician's influence can have a positive as well as a negative effect. When he or she points to a bony ridge on the radiograph, identifies this as the cause of the patient's backache and talks about irreversible damage due to age and wear and tear, he or she is qualifying the backache as incurable and fixes it as such in the patient's mind. Only a small minority of patients can cope with this kind of strain. The interpreter of radiographic studies must always be mindful of how many iatrogenic illnesses may be due to such ill-considered statements. If we then meet such a possessor of numerous radiographs, of a surgical corset and such a beautiful diagnosis, and inject his or her tonsillectomy scar with a dose of a neural-therapeutic preparation and see how, after a lightning reaction, he or she is again able to touch the floor with his or her fingertips without bending his or her knees, our faith in the infallibility of radiographic studies and their interpreters may be severely shaken. When this has happened a number of times, it is quite possible that little may remain of our faith.

No more importance should be attached to radiographs than that due to any other of our numerous aids. As physicians, we have the task of restoring disturbed functions and of re-establishing the neurovegetative equilibrium. For this we have to mobilize the body's self-healing powers, and we ought to have more faith in these. Any doctor who prescribes a surgical support should search their conscience and ask themselves whether they have genuinely exhausted every other possibility before lending their help to allowing the supporting musculature to atrophy. Back muscles strengthened by exercise and massage are always more useful, and an injection into the pelvis that eliminates two-thirds of all lumbar pain in women is cheaper and more ethical.

Cerebrum: the Cerebral Interference Field

The German neurologist, Reid, who died in 1961, stated that if it is true that procaine acts in the cerebrum on inflammation as such and if any residues of earlier resolved inflammatory processes can become interference fields, then all forms of encephalitis were particularly likely to produce such pathogenic conditions capable of being cured by procaine. Unfortunately, there was as yet no method of applying procaine directly to the brain.

The Viennese professor, Mandl, had in fact injected procaine directly into the frontal lobe through a burr hole and had thus performed what might be described as a leucotomy without surgery. But his method was too complicated for normal practical use. Nevertheless, in about half his patients, it enabled him to eliminate or substantially relieve pain accompanying peripheral carcinoma without at the same time provoking such psychological changes and symptoms of functional disturbances as were usually found to occur after surgical leucotomy.

Reid knew of the work of Lina S. Stern, a member of the Soviet Academy of Science, who in 1948 had published a report on "direct chemical influence on the nerve centers" by the introduction of certain pharmaceutical products (but not including procaine) into the cerebromedullary cistern. On the basis of the theoretical argument of her method and of the practical results obtained, Reid concluded that the injection of only a

milliliter of procaine diluted with cerebrospinal fluid need not, as had been supposed, be lethal. He ventured the → (T) cisternal procaine injection and was able by this means to achieve cures bordering on the miraculous. It enabled him to treat a number of post-encephalitic and, to some extent, also inflammatory degenerative cerebral processes that had until then proved resistant to therapy. He was thus able to prove that there is also such a thing as a central interference field that can develop as a result of localized catarrhal encephalitis (mainly due to influenza, i.e., of viral origin) or of latent chronic encephalomyelitis. Such an interference field can cause a wide variety of diencephalic and mesencephalic autonomic dysregulations that may either themselves become determinant factors in a pathological process or cause other pathological processes to become resistant to treatment.

Such central stresses may, as a matter of course, produce functional disturbances presenting a wide variety of symptoms that will hardly ever respond to other therapeutic efforts. The patient can usually recall the exact time when the encephalitic process occurred, whether resulting from catarrh or from influenza. They remember their severe attack of influenza accompanied by high fever and unbearable headache. Their doctor at the time may not even have noticed that there was also an inflammatory process involving the brain. The patient will report that following this illness they suffered from insomnia, recurrent headaches, restlessness, and occasionally from vertigo. Since then they have noted a marked loss of performance, with a tendency to irritability or depression, even to the point of contemplating suicide. They complain of loss of concentration, that they have lost interest in their work and no longer enjoy doing it. In addition, he or she may suffer from unilateral disturbances such as pains in the arm, leg, or back, which are generally played down as "rheumatism." If the radiographic picture also happens to show some signs of osteochondrosis, it is only a short step to reaching a wrong diagnosis of "disk lesion" and the patient will for some time have great difficulty in escaping the clutches of orthopedists, chiropractors, massage therapists, Glisson's sling, and surgical supports. But the basic cause remains untouched and the patient continues to complain. In the end, they risk being labeled as a neurotic, hypochondriac, and neurasthenic, or even as a malingerer, finally ending up at the psychiatrist's who, however, in the nature of things, is likely to derive little pleasure from the patient's arrival. Gradually, the patient becomes embittered and withdraws from contact with their family and the world about them, all the time fully conscious of the changes taking place within them and suffering all the more on account of this awareness.

Reid found that central stress due to a cerebral interference field may produce any of the following symptoms:

- depression;
- neurasthenia, neurodystonia, nervous exhaustion;
- chronic headaches, with or without vertigo;
- shoulder/arm or lumbar syndrome due to osteochondrosis;
- joint pains, arthrosis deformans;
- vasomotor angina pectoris;
- bronchial asthma;
- trigeminal neuralgia;
- spastic torticollis;
- circulatory disturbances;
- nocturnal brachial paresthesia;
- loss of hearing;
- insomnia;
- neurosis, etc., etc.

Several of the above symptoms can, of course, be present at the same time.

To help such otherwise hopeless cases, we must first of all recognize the nature of their disorder. In cases, therefore, where segmental therapy has been of no avail and where no other interference field can be found, we have to check whether a central interference field might not be present as a result of encephalitis. This new way of helping the seriously ill demands of the physician that he or she should make him or herself thoroughly conversant with this method. A neural therapist who is afraid to administer this injection should at least be aware of this possibility and of the indications for it, and should be able to carry out the easily accessible preliminary investigations, in order to place this promising therapy within his or her patients' reach.

Fortunately we need not rely solely on what our patient tells us, in order to obtain our evidence of central stress. There are other objective signs in the form of pathological reflexes. These abnormal reflexes must always be present before an injection into the cistern is undertaken, in order to exclude the risk of accidents and maximize the chances of success. In such cases, the following well-known reflexes will be positive:

- Romberg;
- weakness of convergence;
- dysmetria (finger-nose test).

In addition, there are also the following lesser-known tests, described in greater detail in Part III (Techniques):

- Wartenberg's snout reflex;
- Reid's visual fixation phenomenon;
- Wartenberg's head retractor reflex.

Other reflexes may also react pathologically. For example, the abdominal cutaneous reflexes may be absent, although the muscular reflexes are present, and so on. If a number of these reflexes are abnormal at the same time, central stress is present and an injection of pro-

caine into the cistern may succeed in producing a genuine lightning reaction.

Case History 16: 38-Year-Old Workman

To date, I have carried out this injection of procaine into the cistern on about 50 patients in all. They were all treated as ambulant patients, because I had no opportunity for in-patient treatment for any of them and their condition required such a course. All passed off without mishap.

After his skull had been fractured for the third time, a 38-year-old worker continued to have unilateral headaches that resisted all efforts to cure. They were accompanied by considerable personality changes that made him unemployable and unsociable. His state could be characterized as one of total decompensation. The first injection into the cistern first produced a strong reaction and then an almost incredible restoration of his personality. At his own insistence, I repeated the injection five times in a year, whenever the effect began to wear off. He returned to work and could again cope with all kinds of stress, to an extent above the average. The erstwhile hypochondriac again became a vigorous personality, with a catching optimism and enthusiasm. He no longer suffered from headaches.

Case History 17: 32-Year-Old Patient

Another patient, 32 years of age, became blind and deaf on his right side after facial shingles. Three days after an injection into the cistern he found that his hearing was practically normal again, and this was confirmed objectively by an audiogram. His eyesight also returned to practically the same acuity as before his illness.

Case History 18: Stroke Sufferer

Druschky, who has had extensive experience in this field, witnessed a unique cure by lightning reaction in a patient who had suffered a stroke. For over 2 years, the patient had been hemiplegic, with total loss of speech. Within 2 hours following the injection into the cistern, movement had returned to his arm and leg, so that he was able to eat with his previously useless arm and could walk normally. Within 8 hours, he could speak normally again. It is difficult to believe that something like this can happen but it can, though not every time. Nevertheless, every patient we are able to cure makes up for many failures!

Other Possible Interference Fields

It must be emphasized again that we do not by any means claim that every illness must be due to an interference field. We maintain, however, that any illness may be caused by an interference field, and our experience teaches us that about a third of all chronic disorders is due to an interference field. It would do no harm if every doctor remembered this when his or her normally successful and proven therapy proves of no avail. Unfortunately, we are not always successful in finding the interference field that has acted as trigger for a disorder. The list of frequently encountered interference fields given above does not by any means exhaust all the possibilities. What has been stated should not be taken as a rigid blueprint, to be used as a checklist in which each item is crossed off before one passes on to the next. It is intended as no more than a general guide for anyone becoming acquainted for the first time with this field, as a means whereby they may be led to some of the numerous possibilities that exist.

A skin wound leaves a visible scar, which keeps alive the memory of the event that produced it. But in addition to the supraliminal irritations that have been listed as possible interference fields, there are certainly numerous others that continue to irritate the autonomic system long after the primary stimulus has ceased to be effective. The human being is forgetful, but his or her neurovegetative system forgets nothing. Thus, a long-forgotten periosteal contusion of the coccyx can continue to be active and live on in the memory of the neurovegetative system. When one sprains an ankle, not only ligaments and tendons will be injured, but also nerve endings. An eye that becomes frequently inflamed, epididymitis in early youth, a mastitis that has not been incised, an infection around an injection site, a cyst formed around an abscess in the gluteal musculature, skin exposed to Roentgen rays following cancer surgery, an exostosis following an injury, diverticulitis, chronic lymphadenitis, or a joint mouse: any one of these can act as an interference field. So can bronchiectasis, a thickened pleura, the scar due to an infarct, parodontosis, or thrombophlebitis.

We also know the intestine as an interference field. Occasionally this will be accessible to us by injections into the → (T) (abdominal) sympathetic chain, in other cases an enterobacterial disturbance must first be eliminated by drugs and diet before, for example, a previously incurable eczema can heal. There is also a pulmonary interference field that can build up in the lung after tubercular processes have run their course, or following pleurisy or pneumonia. We can reach this by → (T) quaddles over the corresponding part of the thorax and by infiltrations to and between the adjacent ribs. Similarly, endocarditis, myocarditis, and pericarditis can leave a cardiac interference field behind them.

Admittedly, this is a sea of possibilities. Despite this, the list does not claim to be complete. Even though the foci in the head, with tonsils, teeth, scars, and maxillary sinuses are the main sites of interference fields, cures have proved time and again that we need to take Huneke's teachings literally, for it is a fact that "any part of the body may become an interference field."

Nor should we lose sight of the second part, which is another rule that life itself has taught us, namely that "any chronic disorder may be caused by an interference field." And anyone who bears this in mind will recognize the value of a painstakingly accurate examination and clinical history of his or her patients as a prerequisite for the successful practice of neural therapy. Once he or she has learned to think in neural-therapeutic terms, he or she will be able to find their way to the rarer interference fields and to the way in which to treat them.

Treatment is determined by the site. So, for example, the periosteum of the coccyx is readily accessible. In the case of the eye we administer a retrobulbar injection into the vicinity of the → (T) ciliary ganglion. Detailed descriptions of the techniques to use for the various injections are given in Part III. Only those who are familiar with them all and can prove that they know how to use them to good purpose and effect ought to call themselves neural therapists. And anyone who has had the good fortune to produce a genuine lightning reaction (Huneke phenomenon) will find this experience far more convincing than millions of words.

In his 1991 essay 'Interference Field—Fiction or Reality?,' Professor H. Heine from the University Witten/Herdecke gave the following answer to that question:

> The electro-chemical potential of the basic substance, particularly of proteoglycans and glycosaminoglycans, allows the development of various fields. Every focus has a basic substance, if only a disturbed one. This inevitably leads to the development of interference fields. Due to the autonomic overall relay activity, the disturbance is not limited to the focus and its immediate environment but can express itself along Head's dermatomes and affect the entire organism. Interference fields may become autonomous after the removal of the causal focus. In general, they are treatable with neural therapy. But as a consequence of increasing ecological stresses, the rebalancing after removal of the causal focus becomes progressively more difficult. The restoration cannot be approached locally, but only in context with the regulating ability of the basic substance.

To summarize: chronic inflammations, the residues of injuries and inflammatory processes, pathologically changed tissue, such as scars of every kind and foreign bodies, may all and any of them become interference fields and alter the way in which the neurovegetative system reacts. These interference fields upset the economy of all the vital processes and send out their pathogenic impulses via the neurovegetative system, which is present everywhere in the body. These impulses can manifest themselves at any point of the body as a chronic disorder, with symptoms that may be those of painful rheumatism or neuralgia, of circulatory or metabolic disturbances, or of some functional disorder that can ultimately provoke organic changes. If a neural-therapeutic injection strikes such an interference field, the disorder is eliminated via the Huneke phenomenon. If the rules of neural therapy according to Huneke are correctly applied, such remote disturbances and their pathological symptoms can be cured, insofar as this is anatomically still possible. We are thus capable of practicing a holistic therapy that acts on the causes of illness. The teachings on the pathogenic interference field beyond any segmental order require us to free ourselves at last of the long outdated ideas that can only express themselves in organ-related and segmental terms and hence govern the manner of our dealing with them. Success is the reward of such rethinking!

d) Test and Provocation Methods

Once a detailed case history has been taken, we are often faced with a large number of potential interference fields. Where should we start? If we want to avoid simply following a set pattern and injecting the patient from A to Z, we have to try to narrow the field to those that may be active and to discover which of these, in this particular case is causing the present illness. As a rule, a number of particularly suspect points will tend to be revealed as the most likely interference fields, thus simplifying our decision-making process as regards the sites to be tested first. With increasing experience, our scoring rate will steadily improve. But it is always possible that we may test a number of promising points without obtaining a positive reaction. Modern patients who expect their doctor to examine them with the maximum possible number of pieces of shiny equipment may not always recognize our injections as the differential diagnostic tests, which, in fact, they are. They will incline still more toward this attitude when they have to submit to a whole series of test injections that fail to produce any tangible result. In that event, they will be even more reluctant to admit that we have had to depend to a large extent on their ability to remember and on the information they have provided, and that it is they who have misled us.

Having reached this point, we shall make use of methods that can often help us to distinguish between interference fields that are at present dormant and others that are more active. By such means, we can often produce an entirely new point of view if, as a result, long-forgotten illnesses or injuries can be uncovered by objective evidence to close gaps in the patient's history. This obviously applies also to disorders or damage that were not recognized as such at the time.

Test and provocation methods with regard to foci and interference fields place the organism under additional chemical or physical stress, in that they address themselves jointly or severally to the neural, vascular, and/or myelolymphatic systems and their related cellu-

lar components of connective tissue. The organism must try to make up for this external stimulus. In order to cancel out the outside energy, it has to use more of its own energy. By the manner in which it does this, it supplies us with valuable information on its ability to regulate and react. The healthy organism does not respond at all to the additional stress produced by the test, since it can compensate for it without difficulty. But the organism that is already suffering from bacterial foci or interference fields is under a permanent stress and can no longer compensate the extra stress. If the additional stress of the test, which must always be such that it can be compensated by the normal organism, is added to the permanent stress, the equilibrium is disturbed and the body needs a certain time before it can modify or destroy the test substance. A provocation provides an irritation that the organism, already under stress due to a focus, and with its regulatory mechanisms paralyzed, can no longer compensate or, if the regulatory spectrum is restricted as a result of such a stress, cannot compensate fully. In this case, then, the response may take the form of general or local reactions by which an interference field or focus can be activated. So, for example, a hitherto inactive dental root whose nerve has been removed may begin to hurt, or a previously apparently non-irritant scar or old fracture may start to itch or hurt. Other morphologically altered tissues may also begin to transmit signals that point to earlier pathogenic damage and that the patient will often remember only at this stage, e. g., appendix, gallbladder, adnexae, prostate, etc.

Unfortunately, these methods are not always completely reliable. Pischinger has shown by iodometry that the organism may be in a state of regulatory paralysis, for example, after cortisone or phenylbutazone, and fail to react to a provocative stimulus. We must therefore be clear in our minds that, in the most favorable circumstances, these methods can only tell us whether and where there may be pathological changes present. But they cannot ever provide us with clear information whether these changes are also acting as interference fields and are in fact producing a remote disturbance. Such a causality can, once again, be established only by eliminating the interference field by the Huneke phenomenon.

The methods listed below are aids that may help us further, but no more. Many of them are mainly of interest for hospitals and the practitioner will generally have little occasion to resort to them, though he or she may want to make use of one or another as an additional check in therapy-resistant or obscure cases. When necessary, we therefore have to combine two or more of the possibilities listed below, in order to obtain as comprehensive a picture as possible of the actual interference-field situation.

Biological Tests

First of all, there are three biological tests available to us to establish whether an active interference field or focus is present at all:

a. *The big-toe test (Merckelbach):* The big toe of the supine patient is suddenly flexed in a plantar direction, without warning but not too hard. If the patient complains of pain and, by reflex action, flexes the leg at the knee and hip joint, the test is positive and indicates the presence of an active interference field or focus. After the interference field has been eliminated by lightning reaction or surgery, the test remains negative.
b. *The capillary test (Gotsch):* Negative pressure of 200 mm Hg is applied at three different points of the well-lubricated skin. If more than 12 petechiae develop at any one of the three sites, a focus is probably present (focal diminution of capillary resistance).
c. *The conjunctival histamine test (Remky:* Histamine in a concentration of 1:3000 to 1:10 000 is placed in the conjunctival sac. If a focal disorder is present, it will produce hyperemia of the conjunctival blood vessels. In the case of unilateral foci in the head, the test will be positive only on the side affected by the focus.

Provocation Tests

These tests are stress tests of the neurovegetative system and make use of irritant substances that force the organism to massive regulatory countermeasures. By environmental changes the metabolism in the interference field is activated. The local defensive reaction causes pain. The patient is made subjectively aware by this means of otherwise inactive interference fields. If at the same time there is a reaction in the basic disorder, the suspicion is justified that the interference field that has manifested itself has some causative link with the disorder in question. It is advisable to use at least two of the provocation methods listed below, at intervals of several days. The patient should be told about the signs and symptoms to expect. He or she should be asked to write down the symptoms that occur following the provocation, even if they are minor and of short duration, especially with regard to teeth, tonsils, maxillary sinuses, gallbladder, appendix, bladder, adnexae, prostate, pericardium, pleura, old fractures, and injury sites etc. He or she should note down any general symptoms such as a rise in body temperature, nausea and lassitude, and especially whether the basic disorder becomes worse, since this can be a useful pointer. Climatic change in traveling and reversal treatment such as fasting cures, Mayr's, or Kneipp's cures can also act as provocation and activate latent foci and interfer-

ence fields. Patients should have their attention drawn to this possibility and be asked to make a note of any reaction experienced. The treating physician then has to make his or her own critical evaluation of such notes. Unfortunately, here again, we have to depend on the patient's statements, and these are not always reliable. Here are the provocation methods that may be used:

a. *Spengler's test:* This is carried out with a proprietary preparation, Spenglersan colloid, which contains an antigen-antibody mixture D or Dx. The product is rubbed into the antecubital fossa in the morning and will cause pain during the day in the reactivated focus.
b. *Exertion test:* If an active focus is present, there will be a rise in body temperature and in the blood sedimentation rate after strenuous bodily exertion (e. g., climbing stairs, knee bends etc.). The 2-hour value of the blood sedimentation rate is usually more than double the 1-hour value.
c. *Oltmanns Esberitox test:* A proprietary product, Esberitox, is given orally (initial dose 30 to 50 drops, then 10 drops hourly for 1 day). The disturbed area will react with pain.
d. *Fenner's penicillin test:* Injection of a small dose of penicillin (300 000 units) will cause a painful reaction in the focal area.
e. *Schellong's pyrogen test:* After intravenous pyrogen injection there is a painful reaction in disturbed organs (and possibly also in organs acting as interference fields). Because the febrile reaction produced by this test, it should be limited to hospital use only.
f. *Pape's radiography test:* Irradiation with a dose of 1 rad to 20 rad will produce changes in the blood picture when there is a focal disorder present.
g. *Cutivaccine Paul Novum:* This is another proprietary preparation suitable for use in provocation tests.
h. *Huneke's test:* This test with procaine differs fundamentally from all the other immunobiological and provocation-type test methods given above. As we shall see, the body may respond to our injections as representing additional neurovegetative stresses and provocation. As a rule, however, the neurovegetative system is not subjected to further stress. On the contrary, when we inject into an active interference field, stress is relieved. This is the case to such an extent that, as a result, all the regulating mechanisms and auto-recuperative powers of the organism are unblocked and reactivated by the lightning reaction. Whilst the other tests can only indicate where potential interference fields might be present, Huneke's test shows clearly which of them is also active and whether an inflammatory bacterial focus as taught in focal medicine is, at the same time, also an active neural interference field in accordance with Huneke's teachings. This is the only means that permits us to clarify diagnostic and therapeutic causal relationships between the interference field and the remote disorders of which it is the cause.

However, there are some cases where neural-therapeutic test injections act as a genuine provocation and produce temporary reactions in the interference field, which is the object of our search. Let us revisit Huneke's first lightning reaction: the treatment of the problematic left shoulder of the patient was without positive result. Two weeks later she showed him the scar on her right lower leg. It originated in a case of osteomyelitis during her childhood and displayed a recurring inflammation. Treatment of this scar that had turned into an interference field induced the surprising cure of the shoulder. If the patient is told this beforehand and notes down any such occurrence, he or she may be able to provide us with the information we need to locate the correct site for our treatment. I experienced this with one of my patients on two separate occasions as the case history below recounts.

Case History 19: Mr. J. K., Master Tailor, Aged 45

For 10 years, this patient went from doctor to doctor, complaining persistently about symptoms that fitted no known syndrome, so that he acquired the label of a "paranoid personality." He reported attacks of pain in the region of the liver and—here is the unusual part of it in his own words—"pains that radiate as far as the face and there produce an unbearable sensation, as if someone were pulling my gums upward, at the same time pushing my teeth forward and apart." Since these symptoms had begun to appear a year after a gallbladder operation, the abdominal complaint was at first diagnosed as "postcholecystectomy syndrome." When frequently repeated liver-function tests showed some "deviation from normal" or other, they eventually also yielded him the "clinically established diagnosis of liver disease." But the peculiar sensations in the maxillary region remained, despite dieting and continual investigations and treatment by dentists, oral surgeons, and neurologists. Someone thought of an atypical trigeminal neuralgia, but all attempts to treat this were also in vain. All that was investigated, tried, diagnosed, and paid for is a painful and sad chapter that could fill several pages.

A selective history from a neural therapist's viewpoint as taken from the patient produced the following information: scarlet fever as a child, 1942 tonsillar abscess, 1944 hepatitis and multiple shrapnel scars in the left thigh, elbow, and shoulder; 1956 surgery of the maxillary sinus, 1958 removal of the gallbladder (1 year later his abdominal disorders and the maxillary sinus trouble began to appear); 1969 tonsillectomy, with what was for me an electrifying comment: "for almost

three months after that, my abdomen left me in peace."

This statement naturally prompted me first of all to test the tonsillectomy scars. After the test, the abdominal symptoms (but only they!) disappeared completely for 24 hours as in a lightning reaction, only to reappear, apparently in an even more severe guise. We often hear this kind of statement, namely that the patient feels the pain all the more once the neural-therapeutic effect, which long outlasts the purely anesthetic effect, has worn off. But this should prevent us from breaking down the patient's resistance to repeating the treatment and giving the test injection again at the same site. Two days later, the cholecystectomy scar, which had not been injected, became severely inflamed and at one point a blister formed and burst, producing a discharge of serous fluid. I interpreted this reaction as the result of provocation, in which the abdominal area including the scar had been provoked into taking part. Perhaps the body had now extruded silicate crystals (talcum) stemming from the surgeon's gloves, as its way of helping itself.

The fact that the cholecystectomy scar joined in the reaction following the test of the tonsillectomy scars shows how right the Huneke brothers were when they demanded that, as far as possible, all scars should be tested in a single session, since they can all form a joint interference field. The second procaine treatment, this time of the tonsillectomy and cholecystectomy scars, together with several scars on the thigh, produced another surprise: three shell splinters became palpable in the left thigh and, when this area was touched, the ominous pains in the maxilla were immediately induced. During surgery to remove the three splinters, I did no more than lightly touch the middle one. This produced such a violent spasm in the region of the teeth that the patient cried out and begged me to stop. But by this time I had already seized the culprit and removed it without the patient's being aware of the fact. Now he suddenly took his hands away from his face and said: "Suddenly, it's all gone now!" That indescribable "it," the interference field that had plagued him for 10 years and had sent him in desperation from doctor to doctor, that "it" that none of them had been able to squeeze into the straightjacket of a "diagnosis" and from which none had been able to free him: the "impossible illness" had been cured!

This story had a sequel that I discovered only later. He was still not completely cured. A few months after I had removed the shell splinter he went down with an unspecific fever and abdominal pains, for which no explanation could be found. After a week, a chronically inflamed appendix announced its presence. The patient's organism had meanwhile recovered so much of its defensive capacity that it now wanted to rid itself also of this other chronic stress.

I report this case only because we can learn from it, not in order to inaugurate a new "Dosch maxillary syndrome." It suggests that "diagnosis" is not always the basis of every therapy. I do not by any means want to disparage the value of scientific diagnosis when I say that there are many genuine organic and functional disorders (75% according to Heilmeyer!) that we are unable to understand and treat successfully by today's clinical methods. For these disorders, Huneke therapy treads different paths, for by its procaine therapy it practices diagnosis by making use of causal relationships. Instead of being content merely to summarize symptoms and produce a false diagnosis, we are concerned with finding a genuine diagnosis that will reveal the true cause of the disorder. In the case history quoted above, our diagnosis might read as follows: "Abdominal pain due initially to an interference field in the tonsils, then in the tonsillectomy scars, and coupled with painful bilateral attacks in the region of the second branch of the trigeminal nerve, the latter due to an interference field resulting from a shell splinter in the left thigh" (which, incidentally, was not on an acupuncture channel). In this case, we clearly have two distinct interference fields acting together to simulate an apparently single syndrome. But I can think of no answer to the question why one of several shell splinters should suddenly produce this interference after keeping quiet for 15 years or why and by what means it should have turned from a potential into an active interference field. However, none of this ought to stop us from learning a few therapeutic lessons from this case, for it shows the importance of the active cooperation of a properly informed and intelligent patient. It also demonstrates how essential it is to point out to him or her that interference fields may become active following a test injection and that he or she must make a note of these and report them to us.

As has already been stated, a negative result produced by a provocation test is no conclusive proof that there may not be an interference field present. The organism may be refractory while it remains in a state of regulatory paralysis. The fact that it is in this state and how long this may last can be demonstrated objectively by the Elpimed test and by iodometry (Kellner, Pischinger). But conversely, our provocation may also act as a stimulus to break through this refractory state and modify the body's response from a chronic therapy-resistant state to an acute stage that we can treat. In such a case, the physician must explain to his or her patient that what he or she regards as a worsening of their condition is in fact the hoped-for turning point. However, we also know of cases where provocation methods produced no response, yet a correctly pinpointed procaine injection forced the organism to react with a Huneke phenomenon. I should therefore always place the procaine test at the very start of all diagnostic and

therapeutic efforts. A doctor who gives up too soon cheats him or herself and his or her patient of success.

Equipment-Based Methods

No method of measurement, including normal clinical diagnostic methods, can replace a doctor's skill and knowledge. However, it can be used to extend the cognitive range of his or her senses with regard to whatever is to be measured, if it is capable of providing a quantitative record of the effects of an irritative stimulus and thereby increase our knowledge of the way in which the organism responds to the stimulus and how its regulating system works. Since it is essential for all results to be correctly understood and interpreted, no equipment-based method of examination can ever be better than the physician who evaluates the quantitative results it provides.

In interpreting any measurements obtained, the laws of biocybernetics must be obeyed. In practice, measurements are generally taken via the skin. However, the state of the skin changes in dependence of the terminal reticulum and is therefore dependent on regulatory processes in the control circuits with their widely ramified intermeshed neurohumoral relationships. It is therefore essential to know how they work and to take them into account. In this connection, I want to draw attention to O. Bergsmann's monograph on *Bioelectrical Functional Diagnosis* (*Bioelektrische Funktionsdiagnostik*) published by Haug, Heidelberg, in which the various principles of regulatory physiology used in bioelectrical methods of examining the patient are also summarized.

There are a large number of instruments and devices on the market. The following is a selective list:

1. *Instruments for measuring electrical resistance:* In neural therapy, in our search for an interference field, we usually limit ourselves to measuring electrical resistance or conductivity. In principle, it is possible to measure the electrical resistance of the skin with any standard voltage or ohm meter. The standard instruments used in electro-acupuncture (EAV, Theratest) and acupuncture detectors (nerve-point detector, Svesa neural baton) can also be used in this way. They all serve to measure scar interference fields and acupuncture points, and provide differential measurements. Skin resistance depends on the type of current used, the material of which the electrodes are made, and other technical factors. The standard value varies from one type of instrument to another. Intact skin has a resistance varying from about 150–500 KΩ (kiloohms). At acupuncture reaction points, the measured values are normally only about 40–60 KΩ. The resistance also varies according to the state of dampness of the skin, and it is therefore essential not to attempt to take measurements when the patient is sweating. Further, the measuring current itself modifies the electrical resistance of the skin, and if measurements are repeated after a short interval, the readings obtained should be different for this reason. If they are not, there is a regulatory block in the organism. In patients who have an acute illness, the resistance in the reflex zones near the affected organs is lower, whilst it is greater in areas where degenerative processes are taking place.
   Measuring the electrical resistance of scars to ascertain their interference-field potential is reliable. The resistance of a scar is normally between 120–500 KΩ above that of the surrounding skin. In a neutral scar, the resistance is much the same over its entire area, whilst an interference-field scar will give a greatly increased reading of 600–1500 KΩ above or, more rarely, a very much reduced value below that of the adjacent areas (less than 40 KΩ). In order to produce a Huneke phenomenon, the neural-therapeutic product must always be injected into the site showing the greatest differential reading. Unfortunately, a scar that gives a negative result when we measure resistance does not give us any absolute certainty that it is not acting as an interference field. It has happened to me that an infiltration down to the base of a scar has produced a lightning reaction despite the fact that there was no measurable voltage differential on the surface of the scar.
2. *Standel's EHT apparatus:* The patient is subjected to a low-voltage direct current. He or she holds an electrode in one hand. A soft brush is moistened and used as anode. This brush is used to moisten those skin areas that are examined for foci and interference field indications. The skin above these areas has a lowered resistance. If the electric circuit is closed, more electricity runs through this part of the skin, which turns red for approximately 10 minutes and the patient experiences pain. Patients who wear a beard or are freshly shaven cannot take the tooth test. An instrument that works on Standel's principle is the EAV-Dermatron ST, It can be used for various measurements:
   a. *Electrical skin test:* When infective disorders are present in the teeth, maxillary sinuses, tonsils, gallbladder, appendix, or adnexae, the electrical resistance of the skin is reduced in the corresponding Head's zones. The amperage is first set at a neutral site so that the patient can just feel the current but no pain. In areas with a lower electrical resistance of the skin, the amperage increases to such an extent that they become hyperalgetic and erythematous.
   b. *Test of electrical potential:* Different metals placed in a solution form an electrical element. If different metals are used in the mouth (gold, sil-

ver amalgam, steel etc.), pathogenic voltages of 500 mV and more may be produced. Demonstrable differences of electrical potential will often convince both dentist and patient that the most sensible solution from a biological point of view is to change to a single metal in the mouth. Often it will suffice to replace the silver amalgam with fillings made of neutral plastic material. Pitterling Electronic has developed an instrument, "μ-Potential," that measures the currents exactly.

c. The Dermatron ST serves as a point search instrument (for example, scar testing) and to test for foci like in electro-acupuncture according to Voll (EAV) → 6.

3. *The bioelectrical functional diagnostic decoder* Theratest mini-2 was the first instrument (BF) of its kind. The BF (bioelectrical functional diagnostic) decoder is a sound information system. The quadrants of the body are measured completely, first vertically and then horizontally, by means of three pairs of electrodes. In each direction, the following measurements are made:
   a. static potential;
   b. skin resistance and changes produced by negative 10 Hz impulses;
   c. mobility of micro-ions under negative impulse stimuli;
   d. shift in potential due to negative impulses;
   e. skin resistance and changes produced by positive 10 Hz impulses;
   f. mobility of micro-ions under positive impulse stimuli;
   g. shift in potential due to positive impulses.

   The principle used in this method is that of electrotitration of the skin. Since the colloidal state of the terminal reticulum depends on the functional state not only of the autonomic nervous system but also of the entire vegetative system, the measurements obtained with this decoder provide the possibility of arriving at far-reaching physiological regulatory conclusions. The revelation of regulatory processes is made more dependable by dual measurements, since every measurement is a form of stimulus, thus enabling the type of reaction and reactive capacity of the organism or of the specific area measured to be determined from the difference between the initial and the subsequent measurement. When affected by an interference field, the skin's resistance is increased and possesses only limited flexibility. The reverse currents can indicate tissue acidosis and the potential differences hyperexcitability. Bergsmann demonstrated the therapeutic results obtained with neural therapy, chirotherapy, and laser acupuncture, by proving that the bioelectrical values could be restored to normal levels by these means.

4. *Schwamm's infra-red diagnostic device:* This is a purely passive method in which no outside energy is used. Instead, it relies on measuring the infra-red radiation of the body. For this purpose, the measuring head is guided at a distance of about 50 mm above the skin. Factors such as skin moisture, external electrical current, the pressure applied to the electrode, and the time taken, all of which can affect electrical measurements by introducing sources of error, do not play any part in this method since there is no direct skin contact.

   Contact-thermography according to Rost is a further development of this method. Advanced and highly sensitive heat sensors (thermo-elements) work faster and are more reliable because the very brief skin contact has no noteworthy impact on the measurements. The initial measurement takes place with the patient dressed, in front of both elbows and on the head and neck area. Additionally required points along the cutaneovisceral reflex zones of the rest of the body are measured and registered within 1 minute after the patient gets undressed. 10 minutes later, the same points are measured a second time while the patient is still undressed at 20–22° C room temperature. The relatively small thermal stimulus is sufficient to get a measurable autonomic response from the organism. The extent of the difference between the two measurements represents:
   - 0–0.2 degree difference: regulatory paralysis;
   - 0.3–0.4 degree difference: limited regulation;
   - 0.5–1.0 degree difference: normal regulation;
   - 1.0 degree and above: hyper-regulation.

5. The whole body, including the teeth, is examined, in women also the breasts. Comparison of the graphs of the two series of measurements provides information on neurovegetative reactive capacity, on cutaneovisceral reflex processes, peripheral blood supply, and inflammatory processes. Of special interest to us are any points where the reaction is excessive, reduced, or absent, i.e., points that do not respond to the cold stimulus by way of proper regulation, because it is important to identify these in order to determine the presence of interference fields. If a unilateral paralysis or hyper-regulation is measured, we are dealing with a disturbance that is caused by an interference field. The causal interference field is usually found on the side of regulatory disorder.

   Five minutes after the neural-therapeutic treatment of the interference field, a third measurement is taken. A computer lists the three measurements side by side in black, red, and green. The analysis of the thermogram can show whether or not the causal interference field was eliminated. In the case of its elimination, regional thermal asymmetry be-

tween the two sides of the body is restored. Thus, there is measurable objective proof for the therapeutic success.

The expensive electronic infra-red thermo-vision cameras and the less expensive instruments that use palates of various temperature-sensitive liquid crystals work on the same principle. Different temperatures of the examined skin areas are mapped in different tones (Fig.1.**22**). Dysregulations of the arteriovenous terminal vessels of the periphery that are caused by interference fields are made visible as areas with excessive or deficient blood circulation.

Thermography allows us to locate the interference field. After successful segmental therapy or occurrence of the Huneke phenomenon, it also provides the objective proof of the connection between the interference field and diseased or functionally distressed organs, systems, and body zones. Time and again it is amazing how fast the entire thermo-regulation is normalized, even in remote areas, when the interference field is removed.

6. *Electro-acupuncture according to Voll (EAV):* Some colleagues combine neural therapy with EAV, which they primarily employ for diagnosis and therapy control. EAV does functional organ and tissue diagnostic that is based on the energetic foundation of classic acupuncture. The EAV Dermatron is an electric instrument that measures the functional condition of internal organs and tissues at specific acupuncture points. On a scale from 0–100, the results change according to the regulation capacity. Values between 50–65 indicate normal function. Lower numbers indicate an insufficiency or degeneration of the organ, higher numbers a hyperfunction (irritation) or inflammation.

Normal values require an intact cell membrane and a healthy basic autonomic system. The stabile value of 50 is maintained if the body potential of a healthy person offers sufficient resistance to the stimulation current. Decreasing values signify the disturbance of an organ. It is unable to properly compensate the strain of the stimulation current. This is one way to locate foci and interference fields, assess scars, and discover metabolic irregularities via electronic measurement.

3 Rejuvenation Through Procaine?

The most dangerous diseases are those in which we feel no pain. The worst illness of all, except for stupidity, is old age.
Penzoldt

Aging is the fate of humankind. But premature and uncoordinated aging, the sudden reduction of vital powers, and the appearance of wearisome complaints due to age and degeneration should be regarded as an illness and be treated as such!

Tissue changes with age, it loses water and waste products are deposited, blood vessels and cells calcify and sclerose. The more they do so, the worse the blood circulation becomes and with it the whole of the metabolic system and performance also deteriorate. This naturally reduces the body's efficiency and its defensive capacity. Inevitably, ever more consequential disorders and deficiency symptoms appear: skin becomes wrinkled, eyesight deteriorates; hearing, memory, and concentration diminish. The heart no longer functions as well as it did, the joints become stiff, and an ever greater effort is needed for walking. Sleep and appetite are reduced. The peevish old man sits by the warm stove and wishes for an end to it all, of himself and of all his complaints. And how enviable, by contrast, is the sprightly old woman who has kept her vitality, for whom even old age is still worth living. Why, on the one hand, a blessed old age and, on the other, such a miserable existence beset with premature decay?

Animal experiments have shown that the continual intake of minute quantities of nerve toxins and constant external irritants can lead to tissue changes and sclerosis identical to those we know only from the aging process. Modern life, in fact, positively inundates us with nerve toxins and all kinds of irritants: electromagnetic radiation of a variety of energy ranges, atomic radiation and radiography, toxic foods, alcohol, and tobacco, polluted air and water, foodstuffs full of chemicals, noise, a struggle for survival like that of the jungle; war and the miseries that follow in its wake, fear, hunger, anxiety, and restless activity. The physiological changes due to the premature aging process are most clearly noticeable in the vascular system and extracellular space. The principal functional changes are seen in the reduced adaptability to changing environmental conditions, because there is a time lag in the way the regulating system responds to internal and external stimuli. If, in addition, there are interference fields in the body to lend a hand in upsetting the equilibrium of the neurovegetative system, the tolerable limit can be easily exceeded. The body's spontaneous healing powers are then no longer capable of preventing illness from breaking out and can do nothing to stop the premature aging process.

At first, the body's general condition and performance deteriorate in all respects. These are based on an economic balance and on the coordinated interaction of various component functions. Exogenous and endogenous irritative stimuli severely strain the stability of the cybernetic functions. Normally, the intermeshed control circuits can compensate these time after time, but the summation of excessively strong or persistent individual stimuli or irritations can produce susceptibility and dysregulation. In such cases, the body generally reacts by excessive hyper-regulation and, in extreme circumstances, by regulatory paralysis. Interference fields are amongst the most frequently encountered permanent irritant stimuli, which the body cannot reduce and that force it to a constant additional effort at a very high cost in energy. Interference fields can thus have the effect of allowing any extra stimulus, acting as a trigger factor, to cause old complaints to flare up again, to make existing ones worse or enable new disorders to manifest themselves.

The neurovegetative system thus plays as much a part in the aging process as it does in any illness. What could therefore be more natural than to use a type of treatment for this that will relax the constantly over-irritated nervous system, eliminate the disturbance of a person's inner equilibrium and hence also arrest or even reverse these abnormal symptoms of change attributable to the aging process? Such a therapy is available to us in neural therapy. Walter Huneke was the first to notice that, after being treated by him, older people often stated spontaneously that they suddenly felt 10 to 20 years younger. In the course of treatment with procaine, their posture, bearing, and appearance improved considerably. The same was also true of their eyesight and hearing, and of their bodily and mental efficiency. They became visibly more mobile in every respect and often felt fresh and youthful again after a few treatments. In 1952, he published these observations in

his book on Impletol therapy (*Impletoltherapie*). In this he wrote that in a large number of cases "proper Impletol treatment, repeated every few months, clearly had a rejuvenating effect on the patient and improved his life expectancy."

Unfortunately, this enormously important indication with regard to geriatrics received scant notice at the time. Perhaps his book contained too much that surprised its readers. It was recalled only much later, when the work on successful rejuvenation treatment with procaine done by the Rumanian school under Professor Aslan was published and produced a worldwide sensation. It was apparently inevitable that this rejuvenation effect, discovered by a German doctor and produced with a German medicament, needed first to be confirmed abroad before German science was prepared to accept it and allow Walter Huneke's observations to stand.

It was at first assumed that the possibility of using procaine for relieving degenerative symptoms and making them to some extent reversible was to be attributed to one of the two components produced when procaine is broken down: p-aminobenzoic acid PAB, and folic acid, which is produced when they are further reduced. However, the Rumanian school (Aslan, Parhon) found that pure PAB does not produce such good results in geriatric medicine as pure procaine. Professor Aslan ascribed the rejuvenating effect to a vitaminlike substance H3, which she believed she found in procaine. She recommended regular injections of substantial quantities of procaine. Aslan's treatment calls for 5 mL of 2 % procaine to be given intramuscularly three times a week. The full series of treatments consists of 12 such injections, followed by a rest period of 10 days before the next course of injections. Five to eight such series are given to the patient in a year. A business-like pharmaceutical industry is now producing capsules and pills containing procaine for oral administration over lengthy periods. This pharmaceutical fountain of youth is thus proving very profitable.

We cannot, however, agree with Dr. Aslan's high doses or her interpretation of the way in which procaine acts. Her theory on vitamins was accepted in geriatrics because the multiple effects of vitamins are generally accepted. This does not apply to the rambling explanations of neural therapy for the successful procaine treatment in premature pathological aging due to reversible interference fields. Cui bono—for whose benefit? Maybe the reason we cannot agree with Dr. Aslan is that our specific approach renders the profitable long-term procaine treatment per os or the Gero-H3-Aslan-Injections superfluous? "The average age of humans increases since the Medieval times and should increase even more when the specifics of neural medicine are taken into consideration," said Walter Huneke. This would require that these specifics are commonly accepted and shared.

We build on 65 years experience by the Huneke brothers and remain convinced that, in this case, Aslan's effective agent is not some newly discovered vitamin but consists in flooding the system with procaine. For our part, we consider the site of the injection of far greater importance to ultimate success than the quantity. We set the healing stimulus by carefully pinpointed injections into the neurovegetative system, require far fewer sessions and much smaller quantities of the product. At the same time these are far more effective. The most important factor is the search for and elimination of interference fields (Case History 15, Chapter 2, Part I, see p. 109). If, in the older patient, we eliminate an active interference field, we are helping to restore the stability of the regulating systems and thereby to bring the body's disturbed economy back into a state of equilibrium. This improves its performance in a way that can be proved objectively by ergonometry, enhances the circulation, and produces a better supply of nourishment to the entire tissue system. All this enables us to reduce the degenerative processes. Existing hypoxemia is improved or eliminated. By the elimination of interference effects on the mobile parts of the vertebral column the mechanics of respiration are improved. This is also an effective prophylaxis against senile emphysema. By regaining mobility, the older person is protected against further degenerative damage due to inactivity and immobility, such as arthrosis, spondylosis, and osteoporosis (Kalcher).

In the case of arteriosclerosis of the cerebral vessels, we combine the → (T) intravenous injection of procaine with injections under the → (T) scalp and possibly also into the → (T) stellate ganglion. If coronary sclerosis is the main disorder, we again combine the intravenous injection with → (T) quaddles adjacent to the sternum. In the case of micturition difficulties in elderly men, a few injections into the → (T) prostate can have a noticeable rejuvenating effect, as a welcome bonus in addition to producing an improvement in the disorder itself (Case History 15, Chapter 2, Part I). In women patients, this applies analogously to the → (T) pelvic region. A few quaddles set in the spleen area (dermatomes T8 and 9) and injections to the left celiac ganglion strengthen the immune system by stimulating the immune organ. In senile hypertension, the patient's general condition often improves to a remarkable degree without being necessarily accompanied by any substantial reduction in his or her blood pressure. The velocity of the blood circulation, slowed by age, improves demonstrably under procaine treatment, blood albumin levels are increased and the globulin levels fall. Muscular strength is increased.

It may be generally stated that correctly sited procaine treatment in the elderly can achieve improved

physical and mental performance, both objectively and subjectively. Here, too, there are numerous possibilities from which to choose. The correct choice and the judicious use of the means available calls for thought, knowledge, and skill. More on this subject may be found in *Rejuvenation with Impletol* (*Verjüngung mit Impletol*) by W. Huneke and B. Kern.

Part II
Encylopedia of Neural Therapy

Introduction

Facts to Remember

1. Neural therapy according to Huneke is a regulating therapy, i.e., a holistic therapy. The healing stimulus produced by means of a correctly placed neural-therapeutic substance produces a response from the whole of the neurovegetative system whose pathways are those taken by both illness and recovery.
2. Segmental therapy according to Huneke refers to the selective use of procaine or lidocaine in the area of the disease process. Always examine first, then test! The improvement achieved with segmental treatment increases with repetition up to complete cure. If segmental treatment fails to produce an improvement, look for the interference field.
3. Any chronic ailment can be due to an interference field.
4. Any part of the body can become an interference field.
5. The injection of procaine or lidocaine, repeated as necessary, into the responsible interference field will cure the disorder caused by it, as far as this is anatomically still possible, by means of a lightning reaction (Huneke phenomenon).
6. The conditions for a lightning reaction are:
   a. All disturbances remote-controlled from the interference field must disappear completely, as far as this is anatomically still possible, at the moment of the injection.
   b. Freedom from all symptoms must continue for at least 20 hours (8 hours in the case of teeth).
   c. If the disorder recurs, the injection(s) must be repeated, and the period of freedom from symptoms must clearly increase with every subsequent treatment. A Huneke phenomenon has been produced only if this criterion has been met.
7. If injection into the segment produces no substantial improvement or into a suspected interference field does not produce a 100% lightning reaction, further injections at these sites are pointless.
8. Always try simple injections with small quantities of local anesthetic first, with few but well-placed injections. Injections into the sympathetic chain and the ganglia are our last resort. A doctor who wants to help his or her patient must also be familiar with these. Do not stop treatment until you have tried everything.
9. All suspect teeth must be tested in a single session, similarly all scars. All scars in the same segment must always be injected as part of any segmental treatment.
10. NOTE: Intra-arterial injections into a vessel leading to the brain or into the subarachnoid space can have serious consequences. Always protect your patient and yourself by prior aspiration.

Symbols Used in the Text

→ denotes that the key word following this sign is listed in the Alphabetical List of Conditions and Indications in the following Part II;

→ (T) denotes the key word following this sign is listed in alphabetical order in Part III, Techniques, where the technique for the injection may be found.

Alphabetical List of Conditions and Indications

Try everything and keep what proves good.
This is and remains the sole aim of all
the sciences, and of medicine in particular.
Hufeland

Neural therapy is an art of healing. The art of healing is a combination of 70% diligence and technique and 30% flair and artistic intuition. It cannot be put in the straitjacket of dogmas and rigid rules. Rigidity is the greatest enemy of art. But there are basic rules in every form of art, which it is essential to master.

At first sight, it will seem presumptuous to claim to cure so many different disorders by means of a single preparation. But ultimately all disorders have one thing in common, namely that they arise in the organism on the ubiquitous pathways of the neurovegetative system, on whose functions our very lives depend. Any persistent disequilibrium in this finely balanced energy system is synonymous with illness. Neural therapy acts at this crucial point as a means of restoring the equilibrium and of regulating the functions.

This book is designed primarily for use by the practicing doctor as a work of reference. It includes a small selection from the vast literature on the subject and from my personal experience. It is intended to com-

municate to my overworked professional colleagues a summary of the collected experience gathered in 65 years by the Huneke brothers and their disciples. It provides brief information on the means recommended by modern neural therapy as effective in treating the various symptoms listed. Obviously the discussion can only contain suggestions. No case is identical with another, for there are as many disorders as there are patients. We are sufficiently self-critical to know that whilst neural therapy is a far-reaching and very effective method it is no panacea. We do not try to smash the head of a tapeworm by injecting it with a carefully aimed hypodermic filled with procaine. For that, we, too, use an antithelmintic preparation.

Anyone who leafs through this alphabetical list will quickly recognize the essential elements of what is our attitude to illness and what means are available to us for curing it. Every one of the injections listed and described in greater detail in Part III Techniques, may by itself be enough to enable us to achieve our objective, but often a combination of several injections in the segment is preferable. A single treatment might be sufficient to induce cure. In acute disorders the treatment should as a rule be repeated when the effect wears off. In chronic disorders we normally carry out our tests and/or treatment once a week until they are effective. Unless specifically stated, all types of injection and all quantities given refer to 1–2 % procaine preparations or adrenalin-free 0.5–1 % lidocaine solutions, in the form in which these are generally available as neural-therapeutic drugs.

After each key word the note could be added that if treatment in the area of the disorder and/or its related segment does not produce the desired result, one should search for the interference field. It is only when this has been done thoroughly and conscientiously without avail that we may set our physician's conscience at rest and discontinue neural therapy on that particular patient.

A Necessary Foreword

Individual cases—rules—art—individual case.
This is the great cycle.
Much

Scientific skepticism towards miracle-healers and methods whose effective spectrum is suspect is a healthy and essential safety measure against charlatanism. Let us therefore emphasize again: neural therapy with local anesthetics is not even in our eyes an omnipotent means for curing the sick. But it is a substantial enrichment of our diagnostics and therapy as a whole. In our age of specialization we try to exploit every opportunity neural therapy offers with its objectively demonstrable action on cybernetic regulating processes. We do so to the extent that we regard reasonable and responsible and wherever it is possible. In the nature of things, it is frequently possible in the large number of symptoms produced by autonomic dysregulations. In some cases, the emphasis is on pain, in others it is on disturbances of internal and external secretions or of the blood supply, or of disturbances of blood composition or dyskynesia of the striated and smooth musculature. All these neural irritations, from dysregulation to dystrophy, are capable of producing innumerable syndromes and diseases, from abdomen to xiphoidalgia, and to keep them active. Anyone who has read and understood the works of Bergsmann, Heine, Kellner, and Pischinger on the influence of foci and interference fields upon the autonomic system and on that of our regulating therapy on biocybernetic functions will know that there is an important common denominator in all pathological processes. To him or her this alphabetical list of conditions and indications will no longer seem too extensive. Only the critic who is not conversant with such objectively demonstrable facts will continue to assume, when he or she looks at the broad spectrum of indications, that we are blinkered monomaniacs.

In essence, the start of any treatment is an experiment. This also applies to neural therapy. In neural therapy, neither the indications nor the successful cure can always be determined beforehand with absolute certainty. Thus, its possibilities and limitations cannot be established a priori. This creates difficulties in trying to fit it into the structure of orthodox medicine. In one case, a single attempt may be enough to produce a surprise cure. In others, which apparently present with the same primary symptoms, the same approach may fail. It all depends on the specific circumstances of each individual case. In pathogenic processes, cause and effect are rarely in a linear cause–effect relationship, but are far more generally dependent on the regulatory processes and thus interact mutually, i.e., based on different pathophysiological circumstances. This is also why the effects of neural therapy cannot be established by conventional statistical and pharmacological studies. Our inability to ascertain the relationships accurately in this case ought not to be used as pretext to reject neural therapy on account of prejudice. To do so would fail to do justice to the physician's duty to try anything that holds out hope of success and does no harm. Neural therapy cannot wait until the way in which it acts can be determined with absolute certainty. In practice, success is always more important than explanation.

In the following Part II, I will describe a number of diseases with advice for their therapeutic treatment. They are listed alphabetically with the name of their common diagnosis. The neural therapist knows that we do not treat statistically useful groups of indications,

symptom complexes, or disease patterns, but always suffering individuals with their different constitutions, dispositions, health history, and basic autonomic condition. They all respond differently. We do not think in terms of "rheumatism," "migraine," "asthma," etc., but always of individuals who suffer from comparable disorders with varying origins. Thus, regulation therapy cannot offer template-like treatment suggestions for all the cases with the same "diagnosis." Each patient follows a different path leading to the outbreak of an ailment. Based on case history and examination, we perpetually have to search amongst all the possibilities for the accurate way that leads to the individual cure. Unfortunately and in spite of all our truthful efforts, it will not always be possible to find that way.

Often enough, the selective pinpoint use of local anesthetics will in itself be enough to achieve an improvement in the illness and, ideally, to restore normality. In other cases, such as pneumonia, tuberculosis, cancer, and shock, neural therapy can play an important supporting role side by side with other, conventional methods and the use of "essential" drugs. I have never said that these disorders should be treated solely by neural therapy. The main point where we can help is obviously in functional disorders. However, we know that what may begin as purely functional disturbances, for example, those involving the stomach, gallbladder, and heart, can ultimately escalate and become organic. A process due to a focus or an interference field can result in genuine organic damage to the heart, kidneys, and joints. Of course, we cannot eliminate major pathological organic changes. But we can influence the secondary functional disorders they produce that remain inaccessible to conventional therapy. Pathomorphology can produce a feedback effect and create a vicious circle that makes conventional therapy ineffective. In such a case, the abnormal functional circuits can be normalized to such an extent by neural therapy that other treatment forms can become effective again.

As neural therapists, we avoid the temptation to overstate our successes and become too one-sided, by constantly reviewing our position with a critical eye. We must always act in accordance with the precept *suprema lex salus aegroti* (the supreme law is to heal the sick). Despite our enthusiasm for this method, our conscience as physicians and our sense of responsibility towards our patients always obliges us anew to remain aware of our limitations.

The indications listed below have not materialized out of thin air; they are no mere fabrications and inventions. All are based on publications over the years that bear witness to the successful treatment of these disorders by neural therapy. In addition, for most of them, I can offer the testimony of my personal experience of over 45 years in the practice of neural therapy.

Alphabetical List of Conditions and Indications

A

Abdomen It is no accident that we deal with all disorders affecting the abdominal organs as a single entity: liver, gallbladder, stomach, duodenum, pancreas, spleen, small and large intestines. There are no sharp boundaries in the living organism, merely flowing transitions. The organs listed above demonstrate this particularly clearly, for the functions of each are so dependent on the functions of the others that all of them together also form a single entity in a pathophysiological sense. A healthy digestive system requires that all the organs involved in the digestive processes act harmoniously and in concert with one another.

Gallbladder We know from the pathologists that 75 % of the entire human race will suffer from some form of gallbladder complaint in the course of a lifetime, but that only 8 % will die from it. Eighty percent of all acute gallbladder disease is cured after conservative treatment or will change to a latent state. On average, 15 % of all adults have gallstones, 25 % being men and the other 75 % women. Other sources state that 40 % of all women over 40 have gallstones. It is a striking fact that three times as many women who have borne children are affected than those who have remained childless. This is enough to make any experienced neural therapist think immediately of a possible interference field in the pelvic region. Gallbladder disease is primarily a general disorder. It is preponderantly a metabolic disturbance, irrespective of whether it is inflammatory or whether gallstones play the main part. In 35 %, a biopsy will show fatty degeneration of the liver, 8 % of those suffering from gallstones are also diabetics, and a far greater percentage presents with a latent diabetic metabolic state and adiposity. Incidentally, colic is no proof of gallstones; 10 % of those suffering from biliary colics do not have gallstones.

Surgeons have for a long time demanded that surgery should be undertaken early, since there is little risk at that stage. To their chagrin, the physicians have given only lukewarm support to this demand and the patients' response has so far been disappointing. This may well be due to a relatively high mortality rate of up to 8 % (above 50 years 10 %) and a failure rate of 35 %. Unfortunately, gallbladder disorders generally occur after the age of 40, when mortality following surgery is in any event relatively high. No wonder, therefore, if gallbladder surgery does not stand in high repute: one out of 10 patients dies, three out of 10 will be no better afterwards. For these 30 %, the meaningless term "postcholecystectomy syndrome" has been coined. For these surgical failures, faulty diagnosis or newly formed stones are held responsible, together with changes in the pancreas, and hepatitis, cholangitis, and dyskinesia.

At the 1971 international Surgeons' Congress in Moscow, Cowie and Clark reported a significant observation: following vagotomies and cholecystectomies, the biliary ducts become hypotonic and this may lead to the formation of gallstones as a result of stasis or retention of bile. This not only explains why new stones are formed again after surgery to remove gallstones. It also enables one to conclude that any irritation of the vagus may have a lithogenic effect. But we can deal therapeutically with reflex hypotonicity of the biliary ducts, which may be caused by irritation of the vagus, by attacking it via the → (T) (abdominal) sympathetic chain, either before or after surgery. Or instead of surgery!

The surgeons' argument that cholecystectomy is an effective prophylaxis against cancer and that this, according to them, is enough to justify the risk, proves to be no argument at all when looked at a little more closely: only 1 % of all gallstone sufferers develop cancer of the gallbladder. Nor does surgery to deal with "adhesions" bring much for the patient: only 2.5 % of follow-up operations were found to be indicated (overlooked stones, papillary stenosis). For the other failures, a strenuous search for the culprit continues in every direction: irritable colon, hiatus hernia, duodenal ulcer, achlorhydric gastritis, intestinal allergies, lactose intolerance, cirrhosis of the liver, ulcerative colitis, coronary affections etc. In other words, the search concentrates exclusively on the attendant symptoms and consequences of surgery, instead of facing up squarely to the unpalatable fact that the true cause is an interference field. Out of 100 people with gallstones, 90 never know they have them, or at least they are not aware of them until their doctor tells them that they have them. Only the remaining 10 become gallstone sufferers.

Apart from iatrogenic and/or psychogenic causes, the factor that must enter the picture before a gall-

stone carrier without symptoms becomes someone suffering from gallstones is an interference field. Since Huneke has shown us how to eliminate interference fields, we are now able to turn someone suffering from gallstones back into a healthy carrier of gallstones again. Conservative therapy must therefore start with the interference field, if it wants to be included in the discussion, not by dealing with dyskinesia and bacteria that settle in the gallbladder only secondarily!

By the large number of cures achieved even amongst patients who have had unsuccessful gallbladder surgery, neural therapy has proved that in the clinical picture of gallbladder patients an interference field is particularly frequently the activator of deviant metabolic behavior and of secondary dyskinesia, stone formation, inflammation, adhesions etc. Only disturbances due to segmental factors can be cured by local measures within the segment. Surgery is a form of segmental treatment. But about 30% of all cholecystopathies are not segmental in origin but are due to an interference field, and these form the majority of the cases that cannot be treated successfully by surgery. They have to be treated on an individual basis, in which organ-linked thinking and action yield to a cybernetic approach and a holistic therapy.

The specialist in internal medicine ought not to refuse a priori to discuss neural therapy. Instead, he or she might try it once or twice without prejudice (and, of course, competently) before turning over his or her patient to the surgeon. If a woman patient states, as is so often the case, that she started to get fat after her second child and that her biliary colics began about this time (Speransky's "trigger effect"), he or she must find and eliminate the interference field in the → (T) pelvic region and, if necessary, also treat the → (T) thyroid, in order to allow her biliary ducts to leave her in peace. A gallbladder operation in such a case would be totally mistaken and would merely produce fresh neural interference fields (see Case Histories 12 and 14 in Part I, Section C, Chapter 2). How many women could be helped if only this fact were more generally known amongst doctors? If we state that every gallbladder patient should be treated by neural therapy with procaine, the "surgeon's bloodless knife," as early as possible, we base this demand on numerous cures.

The deviant metabolic behavior has to be brought back into line first, before the secondary changes become too widespread. Acute indications such as empyema, phlegmons, pericholecystitic abscesses, and occlusion due to stones with persistent icterus, obviously belong in the surgeon's hands and must not be delayed. Segmental biliary conditions can be cured better and with less risk with procaine than by surgery. The patient whose gallbladder affection is due to an interference field, however, can be helped only via the Huneke phenomenon and, in such cases, the pointless operation (with all its consequences) should be strictly avoided (see Case History 8 in Part I, Section C, Chapter 2). Hence, neural therapy before cholecystectomy, early treatment with procaine instead of early surgery! If segmental treatment fails to be effective and if no interference field can be found as the cause, there is still time to fall back on surgery. Based on my own experience, I would estimate such cases to amount to less than 30%, and these include a large number of psychogenic cases. I should therefore also recommend involving the psychotherapist before the surgeon. "Thou shalt not harm" must be our first commandment, especially in treating gallbladder patients.

Liver Over the years, the methods of investigation and treatment of the various organs have become so differentiated and complex that the general practitioner can no longer understand them. So, for example, there are over 170 liver function tests alone! The one thing they all have in common is that they are not absolutely reliable. A divergence between loss of function and anatomical diagnosis is uncontested. Thus, only a liver biopsy can establish with certainty the presence of any of the numerous forms of hepatitis and fatty degeneration of the liver. Fintelmann wrote that "in hardly any other medical specialty is there such a discrepancy between almost perfect diagnostic tools and techniques on the one hand and disappointingly unspecific therapy on the other as there is in hepatology."

As far as the patient is concerned, he or she is far better served if we give him or her a timely injection to the abdominal → (T) sympathetic chain and into the → (T) epigastrium rather than wasting precious time trying to solve the riddles that often conflicting laboratory reports set us. The patient who is treated actively will gratefully notice that our injections have eliminated the pressure he or she has felt in the liver region and that at the same time he or she has stopped feeling ill. We know from experience that the illness disappears when we stop feeling ill, which helps to cure the ailment more rapidly and with less complications. Only an improved blood circulation can help to effectively prevent the development of chronic progressive hepatitis, liver atrophies, and cirrhosis of the liver. Once a cicatrization with excessively destroyed tissue has developed, our injections cannot reverse this condition. A chronically diseased liver is no contraindication for neural therapy. Quite the reverse, for the liver is one of our most successful fields of activity. Based on the success of the anesthesia of the right abdominal

sympathetic chain, it is fair to assume that, in addition to its known functions, the liver has an important autonomic regulation function in the corresponding segment and as the origin of an interference field. The local anesthetics with amid structure (lidocaine etc.) are not fit for the treatment of acute hepatitis or chronic liver damage because detoxification takes place in the liver.

Cirrhosis of the liver In advanced conditions with excessively damaged functional tissue, positive results from our therapy cannot be expected. However, there is no reason to give up entirely. Stimulation and support of self-healing processes are still indicated. The following case demonstrates that there is a chance for success.

Case History 21: A. S., Aged 58

In 1962, A. S., a woman of 58 years from Munich, suffered an infectious hepatitis, which required 8 weeks of hospitalization in 1963. She was diagnosed with an inflammatory episode of chronic hepatosis. The laboratory results indicated a severe damage to the hepatic parenchyma. She was treated with high doses of cortisone and hepatic medication. The hepatic puncture that was done before her discharge led to the conclusion "old and new liver cell damage."

Eleven years later, in the presence of her husband, the senior physician of a Munich clinic told her bluntly that, "according to the diagnosis of the hepatic puncture, she was suffering from advanced liver cirrhosis, which is incurable and her life expectancy was at best another 4–6 years." He might have been a good physician but was certainly not a good psychologist and definitely a bad prophet!

After a successful sciatica treatment, the husband asked me, without his wife present, if there was really nothing that could be done, not even for the constant pressure in the abdomen and the unpleasant eructations. I was willing to try it. After six injections into the right celiac ganglion and the epigastrium preperitoneally the pain improved. The pain had disappeared after 11 treatments. Her general condition and the results of her liver test improved. After 21 treatments (in the course of 15 months), scintiscan and tomography was without pathological findings. At the end of 1976, an ovarian carcinoma was treated with surgery and radiation and cytostatics. In addition, beginning in 1977, peritoneal tuberculosis that she had in childhood had returned and was under treatment. The liver had to deal with another 3 months of tuberculostatics. The liver tests showed temporary worsening of the condition, which became normal again after the strong medication was discontinued.

Test results in January of 1978: GOT 22, GPT 34, gamma-GT 27, LDH 272 mu. Between 1978 and 1983, the annual control sonography showed no metastases, merely "the liver measures 11 cm in the medioclavicular line, fat and connective tissue deposits."

Test results in 1984: GOT 21, GPT 22, gamma-GT 31, LDH 3.9 U/l. For the last year, the patient has not taken any medication. 10 years after her "death sentence," she feels very well for her age. Now, what was that? Was it a wrong diagnosis, suggestion, spontaneous healing, or the success of neural-therapeutic segmental therapy?

In 1989, through laboratory tests on rats with (carbon tetrachloride–induced) liver cirrhosis, E. Hanisch and his colleagues tested the influence of splanchnicectomy on the hemodynamics of the liver region. They discovered a 50 % increase of the arterial blood flow to the liver with a simultaneous lowering of the pressure in the portal vein! This research was discussed in the East Berliner *Zeitschrift fuer klinische Medizin* (*Magazine for Clinical Medicine*). It stated that, "this approach requires further investigation, because it shows the potential for a new therapeutic concept. Supported by sonography, the blockage of the celiac ganglion can be performed in humans as well." My comment here: "You got there late, but you got there!" Since 1953, the therapeutic "blockage" principle, even without sonography, has been successfully applied thousands of times by neural therapists!

Dystrophy (protein deficiency) effects Late effects of malnutrition in prison camps include liver damage, infection → immune deficiency, "vegetative dystonia," and endocrine insufficiency. Most serious are the affections of the neurovegetative regulating mechanisms. The frequent result is a change of tonus of the sympathetic system. The generally "functional" disorders respond well to systematic procaine therapy.

Hepatitis Acute hepatitis accounts for 20 % of all notifiable diseases in Germany, around 30 000–40 000 cases a year. The true figure is likely to be substantially higher, since 30–50 % of all cases of hepatitis never show the characteristic symptom of jaundice. We may therefore have to assume that the patient has had hepatitis and that his or her liver is acting as an interference field even if he or she cannot tell us that he or she has ever suffered from liver disease. The number of spontaneous cures in acute hepatitis is believed to be about 90 %, whilst 1 % of those suffering from it die in the early stages of the disease, 1 % develop cirrhosis of the liver and the remaining 8 % become chronic.

Injections as early as possible into the → (T) sympathetic chain, repeated once or twice weekly, make the jaundice disappear surprisingly quickly, and the enlarged liver and the pathological laboratory results return to normal. The period of illness is

cut by half and all the subjective symptoms are greatly improved as a result of the better blood supply to the liver. This treatment is the best prophylaxis against liver atrophy and other late effects such as interference-field formation. In the case of post-hepatic effects, such as hypodynamia, which may persist for months, producing fatigue, low energy, hypotonia, collapse tendencies, and could be a sign for adrenal insufficiency, injections to the → (T) celiac ganglion (abdominal sympathetic chain) are an effective treatment that reduces the recovery time considerably. Other practitioners recommend → (T) peridural anesthesia between T8 and T12, but this is technically more difficult and offers no advantages by comparison with our method. Repeated → (T) intravenous procaine injections have proved effective against the distressing itching in jaundice.

Segmental therapy can turn aggressive hepatitis, confirmed by histological and laboratory examination, into a persistent form and ultimately cure it. One case that represents several similar cases will demonstrate this in the following.

Case History 20: H. K. Factory Worker, Age 39

In January of 1975, at the age of 39, the factory worker H. K., female, from Eching was in a severe car accident: shock, rib fractures on both sides with contusion pneumonia, pelvic ring fracture, and splenic rupture. A splenectomy and eight blood transfusions were required. Six weeks later she suffered an acute viral hepatitis that was treated with cortisone (50 mg going down to 15 mg). In May, a liver biopsy showed a still active progressive hepatitis that was treated with 20 mg Ultralan (fluocortolon) and 100 mg Imurek (azathioprine) per day. After the transaminases returned to normal, the patient was released in June to the care of her family physician, with the recommendation to continue the daily treatment with 100 mg Imurek and 5 mg Ultralan. In spite of the medication, the condition of the patient deteriorated and 7 weeks later she had to be admitted to the clinic again. GOT had increased to 900, GPT to 1900, gamma-GT was 120 mu and gamma-globulin 25 %. Once more she received intense treatment with corticosteroids and immunosuppressives, which normalized the test results within a month.

Another month later she came to me, because she was told that she had to expect these episodes for the rest of her life. I treated her with injections to the right abdominal sympathetic chain, in the epigastrium, and the pelvis. As I found out later, she had discontinued all the medication on her own. After 3 months and 12 treatments, the diagnosis of the control puncture was not aggressive hepatitis but merely persistent chronic hepatitis. The laboratory results did not give any indication for an impending episode and Ultralan and Imurek were officially discontinued. The central clinic of the LVA Oberbayern (insurance company) concludes from the final examination: "Due to the initially adverse progression of the hepatitis, an immunosuppressive therapy was decided on, which was discontinued in March of 1976. In the course of the healing process, repeated examinations did not show any indications of humoral activity. Antibodies that indicate chronic hepatitis were not detected. There was a confirmation of Australia antigen antibodies. This leads to the conclusion that hepatitis B was present during the past year. The condition appears to be cured."

Follow-up period of 8 years: no relapse, all regular control examinations showed normal results. Ever since and without missing work, Mrs. K. has done piecework 8 hours a day for the metal industry.

Pancreatic disorders In addition to the well-known dyspeptic disorders, there is pain in the left upper abdominal quadrant, which radiates towards the heart and left kidney. Occasionally, there is also a boring pain in the xiphoid angle, which can extend as far as the area between the shoulder blades, and fibrositic nodules may form in the left trapezius muscle. The corresponding Head's zone is centered at the left of T8. Apart from giving a fermentation substitute and the injections listed under → abdomen, we also inject to the → (T) sympathetic chain, especially on the left but occasionally also on the right, since the stomach and duodenum are inevitably co-involved.

In acute pancreatitis, → (T) intravenous procaine injections have proved effective, together with segmental treatment of the hyperalgetic tissues; also → (T) paravertebral anesthesia to T8 to T10 left and injections to the → (T) sympathetic chain at the left upper renal pole. If this proves inadequate, the lumbar → (T) sympathetic chain should also be injected when the treatment is repeated.

Makocha treated 119 patients with acute pancreatitis by administering procaine injections bilaterally to the upper renal poles. He described these as a "lumbo-retroperitoneal Novocaine block" (150 mL of 0.25 % Novocaine solution). With this, he gave 500 000 units Monomycin and 10 000 units Trasylol, after having ascertained that there would be no allergic reaction. In 84 % of these patients, the pain improved within 20–30 minutes following the procaine injection and vomiting stopped. An emergency operation was indicated only if this conservative form of treatment failed to produce a response within 6–12 hours. In the normal course of events, patients could be discharged from hospital within 10–12 days.

Peptic ulcers As far as we are concerned, peptic ulcers are merely another symptomatic form of → neurovegetative dystonia. Excessive physical, chemical, bacterial, mechanical, mental, or other forms of irri-

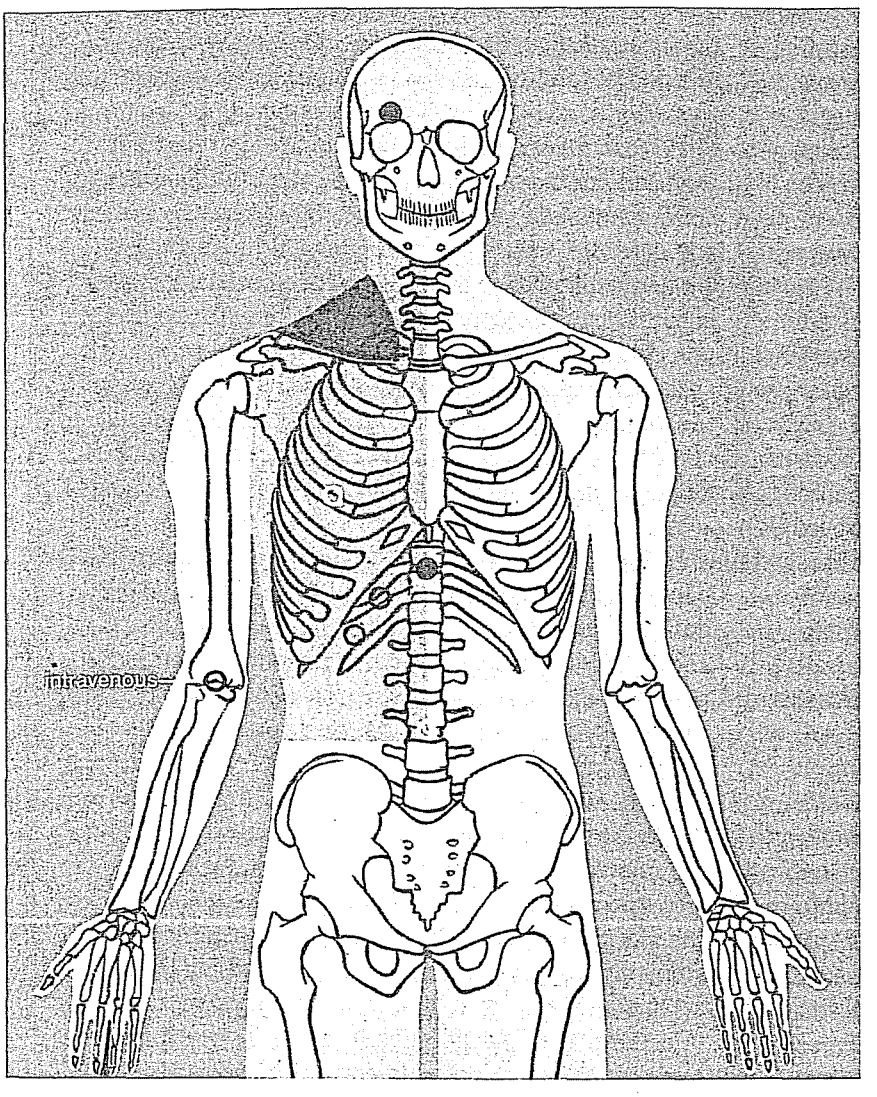


Fig. 2.1 Segmental therapy in disorders of the liver and gallbladder, anterior aspect.
● Standard points
○ Points where reactions are frequently obtained
Segmental reactions possible
Segmental reactions frequent

tation can lead to changes in the neurovegetative system. The next irritative stimulus that can no longer be absorbed by the regulating mechanisms then acts as Speransky's trigger factor and will lead to "neurocirculatory dystonia" and thus to organic damage. Which organ will be damaged depends on the exogenous noxious stimuli and on the hereditary or acquired point of least resistance. Depending on the circumstances, we shall be able to produce a response from the disturbed autonomic system either by neural therapy or by psychotherapy. This is of far more primary importance to us than knowing whether the patient is hypoacid or hyperacid. Hydrochloric acid can be produced only by involvement of the nervous system, and this is precisely what we have to try and restore to normality. The regulating effect of procaine on the autonomic controls that govern the secretion of the gastric juices is demonstrated by the fact that normal mean values are quickly restored to the extent that this is still anatomically possible, irrespective of whether the patient is hypoacid or hyperacid at the start. Due to our success with gastric ulcers, it seems that our injections have a considerable damaging impact on the environment for the *Helicobacter pylori* bacterium. See → appendicitis.

Dumping syndrome In the case of dumping syndrome, after two-thirds of the stomach secretion, the emptying of the stomach causes overdistension of the efferent intestinal loop and a pull on the mesentery. The vagal stimulus causes the secretion of vasoactive substances, such as serotonin and kallikrein. We can often help in the elimination of these functional disturbances.

Segmental Therapy in Abdominal Disorders

1. → (T) Intravenous procaine injections have a reversant, analgesic, anti-allergic, vasodilator effect. At the same time they also reduce the permeability of the vascular walls. In the intestine and the biliary ducts, procaine has proved to have a musculotropic and spasmolytic action, which manifests itself especially clearly when there is a high initial tonicity of the vagus. On the other hand, intestinal function can also be restored in hypotonicity, e.g., in post-operative atony (Zipf). The action of these local anesthetics

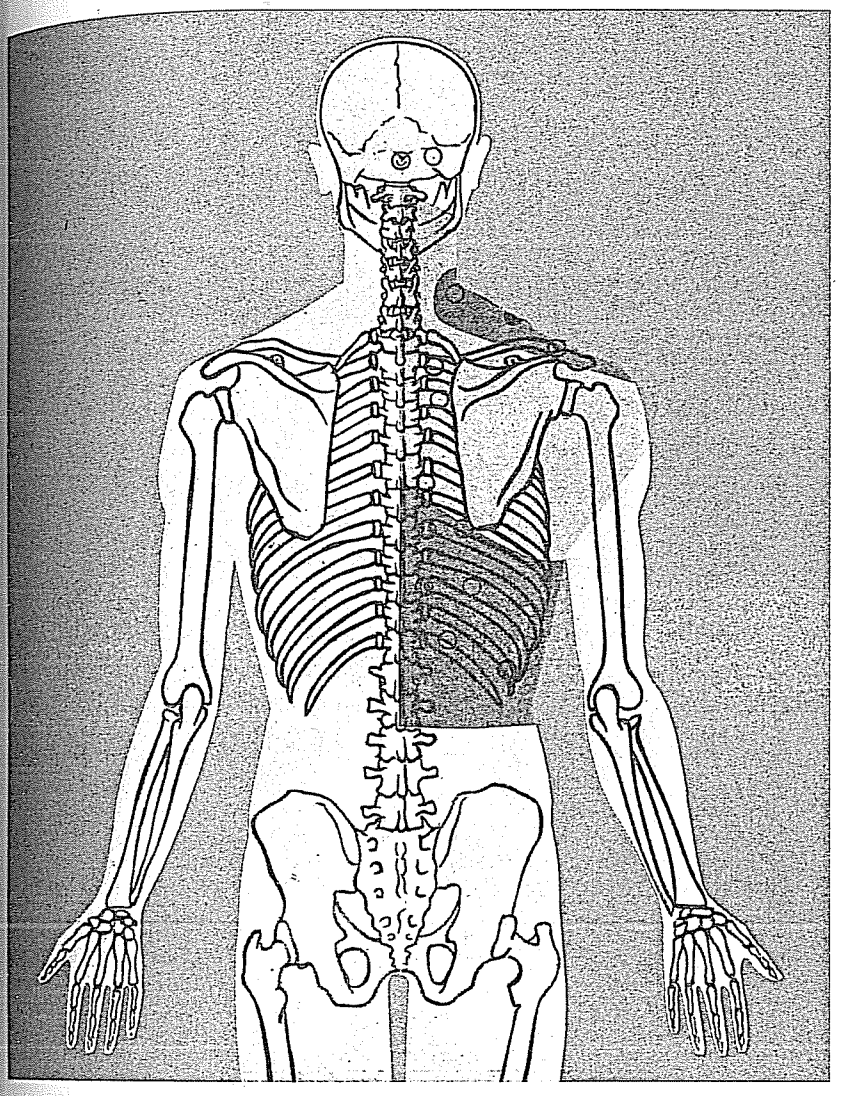


Fig. 2.2 Segmental therapy in disorders of liver and gallbladder, posterior aspect.
● Standard points
○ Points where reactions are frequently obtained
Segmental reactions possible
▒ Segmental reactions frequent

on the nerve centers is so extensive that a gastric ulcer will often heal completely without dieting or bed rest after treatment with a series of about 10 intravenous injections given once or twice weekly.

2. → (T) Quaddles with a neural-therapeutic product over the epigastrium, gallbladder, or pancreas, i.e., over the painful organ and in the associated Head's zones on the back and shoulders. We need to remember that the reflex zones of the abdominal organs extend into the dorsal area. For example, pain in the case of a gallbladder ailment can be removed by setting quaddles in the dermatomes C3 and C4, T6 through T10. This disables the corresponding segmental nociceptors in the skin.

In the case of non-specific intestinal disorders and disorders of the abdominal cavity that cannot be clarified with regular diagnostics, we palpate the abdominal wall carefully and place the quaddles over the affected areas indicated by the patient as being pressure-sensitive. After that, we proceed with → (T) preperitoneal infiltration. These injections should be given at about weekly intervals until the symptoms disappear. In addition, in such cases it is always desirable to restore the intestinal flora by supportive treatment with drugs and diet.

In acupuncture, there is a "key point of the stomach" (BL-21), which is used for all gastric disorders including pylorospasm, hiccoughs, and gastric colics. It lies between the lateral processes of T12 and LI, two fingers' breadths from the dorsal median line and is set bilaterally. We place a quaddle over both points and then penetrate through the quaddles to infiltrate to a depth of a few millimeters. → (T) Scars in these referral areas need to be given special attention.

One to three (painful!) quaddles with double-distilled water into the areas of maximum pain cause colics to disappear at once, whilst pain due to inflammation will persist. This is especially useful in providing a differential diagnosis between colic pains and an "acute abdomen."

3. Injections → (T) preperitoneal into the → (T) epigastrium.
4. An injection into the → (T) nerve-exit point of the right → (T) supraorbital nerve is also recommended in all liver and gallbladder disorders, especially if it

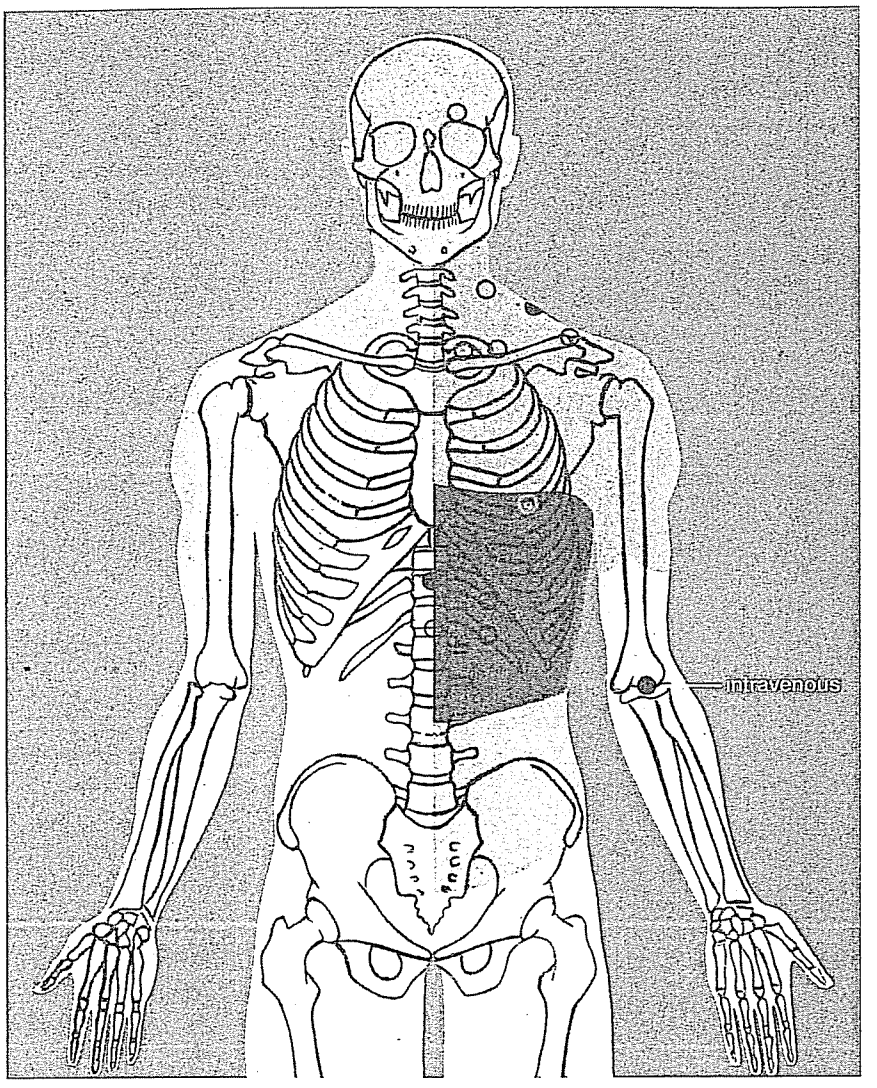


Fig. 2.3 Segmental therapy in gastric disorders, anterior aspect.
● Standard points
○ Points where reactions are frequently obtained
Segmental reactions possible
Segmental reactions frequent

is pressure-sensitive, as will be the case in about a third of all right-sided abdominal disorders. Procaine injected to this point can often stop a biliary colic. The corresponding point on the left more rarely plays a similar part in gastric disorders.

5. If we find deeper-seated hyperalgetic points when palpating the patient, e.g., in the musculature of the spine, we first set an intracutaneous → (T) quaddle over the site and probe through this in depth until he or she indicates a sharp pain. At this point we then infiltrate a small quantity of procaine intramuscularly (→ (T) intramuscular infiltrations). If the vertebrae themselves are sensitive to pressure or tapping, we inject to the periosteum. In gastric disorders, Vogler, with his periosteal massage, found that there is a palpable dip in the periosteum on the left costal arch (lying approximately on the nipple line), and that, by massaging this, it is possible to cure gastric ulcers. For the gallbladder, this hyperalgetic point (indicating a hyperalgetic change in the periosteum) is often found on the right costal arch. We make use of these observations and inject the local anesthetic into these sites to obtain the same results as with Vogler massage, but more easily.
6. The most elegant treatment for biliary colic is by → (T) paravertebral anesthesia of the right intercostal nerves from T9 through T11. For gastric colic, the corresponding intercostal nerves are those on the left from T6 through T8. Intercostal anesthesia to T5 through T11 is also the best way to relieve post-operative pain after abdominal surgery. It prevents a lowering of the patient's vital capacity and of his or her arterial oxygen level far better than giving him or her analgesics, and cuts down the risk of pneumonia and atelectases.
7. In any segmental abdominal disorders, including chronic constipation, the injection to the splanchnic nerve and the celiac plexus and its → (T) ganglia on the affected side (e.g., on the left in mucous or ulcerative colitis) or alternately left and right has proved to be particularly effective. It improves the blood flow to the liver and choleresis, which in turn, lowers the bilirubin level.
8. From acupuncture we have also learned to give our attention to the inner aspect of the thigh, at the dor-

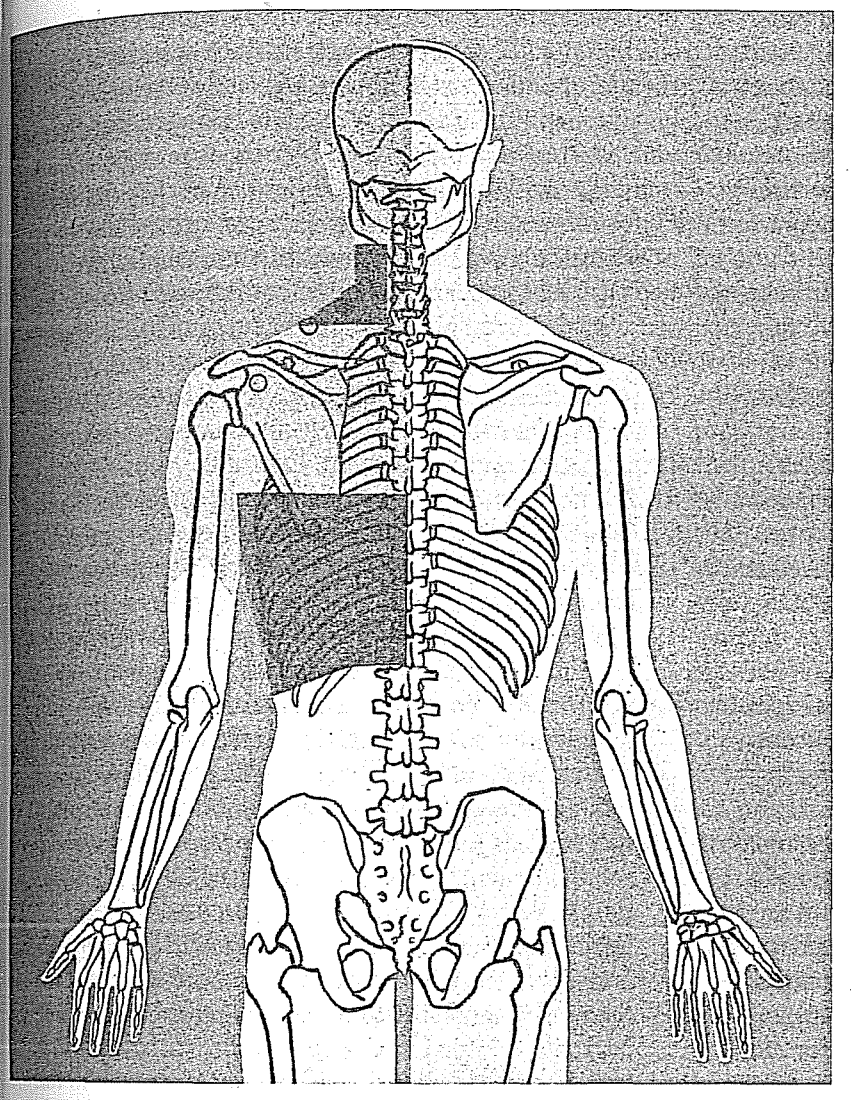


Fig. 2.4 Segmental therapy in gastric disorders, posterior aspect
● Standard points
○ Points where reactions are frequently obtained
Segmental reactions possible
Segmental reactions frequent

sal edge of the sartorius, to set → (T) quaddles there and to penetrate through these to a depth of 40–80 mm.

Every one of the injections given under (1) to (8) can help on its own, but we generally combine two or more, depending on the circumstances. In chronic abdominal disorders we can hardly ever avoid resorting to some sort of polypragmatism. In addition to the injection to the abdominal → (T) celiac plexus, → (T) epigastrium, a series of → (T) quaddles on the upper abdomen—a few of these down to the peritoneum—we also like to go into the points found by Vogler on the periosteum of the lowest rib. All this should be done at a single session. Some neural therapists inject the right abdominal and left lumbar sympathetic chains together in one session and change sides the next time, top right and bottom left. F. Huneke almost always injected only the right abdominal sympathetic chain, with no more than 2 mL Impletol. As a rule this is enough if the needle is in the right place.

As always, if there is a recurrence of the disorder, these injections have to be repeated. Experience shows that the effect increases on repetition. By means of these injections we can generally cure or at least greatly improve any segmentally caused abdominal disorders, which could otherwise be improved or cured only by local medical or surgical means. These generally involve greater risk and take longer.

Bed rest and other measures apart from these injections have only a supporting role to play in neural therapy. Even severe gastric hemorrhages can, as a rule, be controlled by repeated procaine injections to the → (T) sympathetic chain, intravenously (→ (T) intravenous procaine injections), into the → (T) epigastrium, and into Head's zones. Mortality from operative treatment of hematemasis has always been greater than from conservative treatment.

In indurated gastric ulcers (and to relieve pain in gastric cancer), Bricis used a fiber-optics gastroscope to help him inject a 1% procaine solution into the pylorus and into three or four sites around the ulcer or tumor. This resulted in cures of 89.6% of all ulcer cases, 60% of them being cured in 2–3 weeks!

In 30% of all patients with abdominal disorders, local measures fail, including surgery. In these cases, the illness smolders on inexorably. One neighboring organ after another becomes involved, until death at last releases the patient from his or her sufferings. These cases are due to interference fields and can be cured only by finding and eliminating the cause.

Daily practice has taught us that there is an "abdominal area interference field" that can turn into the source of pathogenic impulses and misinformation for regions outside of itself. This field forms following abdominal surgeries and inflammations of all sorts, for example, hepatitis, pancreatitis, amebic dysentery, or as a result of → dystrophy (protein deficiency) in prison camps or famine-stricken areas. In these cases, our splanchnic and celiac anesthesia (celiac plexus) are also able to clarify the situation and remove remote disturbances.

The "nervous stomach," which does not respond to the → (T) intravenous injection or to an injection into the → (T) epigastrium is, as far as we are concerned, quite often merely one of the guises of what is known as → neurovegetative dystonia. In these cases, a series of injections, for example, into the → (T) thyroid, can often produce rapid relief and enable other links to be more clearly recognized. In the case of ulcers, the frequent interference field caused by chronic appendicitis needs to be remembered! In infants and toddlers who suffer from pylorospasm, dyspepsia, intestinal spasms in the umbilical region, and such, the → (T) scar of the navel can be the interference field.

Abdominal glands tuberculosis of: → tuberculous peritonitis.

Abdominal surgery post-operative pain following: → adhesions, → post-operative pain.

Abortion (threatened, habitual, febrile): Only 70% of all inseminated eggs result in a healthy birth. Within the first 4 months of the pregnancy, 25% of the 30% miscarriages are due to defects in chromosome structure, which is often not even recognized as an abortion. The remaining miscarriages are caused by exogenous, endogenous, psychogenous, or immunobiological factors. The hormonal changes and stresses due to pregnancy can cause adaptive difficulties and dysregulation in balancing the hormonal output and the neurovegetative excitatory level (pituitary, ovarian, and thyroid hormones). Hormonal disorders of the ovaries and thyroid, whether they result from hypofunction or hyperactivity, may produce psychic or somatic states of tension and lead to miscarriages. Neural therapy can help restore equilibrium, irrespective of the initial autonomic condition, produce eutonia of the uterus and vascular system, and induce the necessary mental relaxation. We can, in this way, provide a harmless alternative to the risky use of hormones in early pregnancy. The German Society for Endocrinology has issued warnings against the use of estrogens and gestagens in cases of threatened or habitual abortion. In girls whose mothers were treated with Stilbestrol in early pregnancy, a high incidence of vaginal cancer was found to occur, with a correspondingly high incidence of testicular disturbances in boys (Jung). Here are the treatments for three types of abortion:

1. *Febrile abortion.* Becke administers 1 mL of procaine intravenously and infiltrates the → (T) pelvic region and → the (T) Frankenhauser's plexus before dilatation and curettage. He rejects the administration of sulfonamides and antibiotics, since these would merely produce free endotoxins. Under procaine cover, the patients are afebrile within a few hours, they feel much better, and renal function remains intact. If required, the injections are repeated after 4–5 hours. This will prevent the occurrence of the Shwartzman-Sanarelli phenomenon (Huebschen).
2. *Habitual abortion.* Treatment before and during pregnancy: → pelvis. The uterus of women who are subject to autonomic hyperexcitation may be ready for labor during the entire period of the pregnancy. For this reason, Mink also recommends neural-therapeutic injections into the → (T) thyroid at about weekly intervals until the sixth month of pregnancy, in order to relax the autonomic nervous system.

   I first published this observation in 1960. Twenty years passed before a clinician checked and was able to confirm my statement. Zahn uses the injection into the thyroid in premature labor from the 20th week of pregnancy, "if the conventional use of beta sympathomimetics and prostaglandin inhibitors is not enough to inhibit labor." Slender women with a nervous constitution and with or without a slightly enlarged thyroid are particularly grateful patients for this method.
3. *Threatened abortion:* In addition to the usual measures, segmental treatment will help to reduce the irritability of the uterine musculature: → pelvis. The depolarizing processes that occur in the cell membranes of the myometrium, which can cause premature and excessive labor pains because of raised tonicity, can thus be reversed. But since anxiety and the fear of abortion will increase the tone of the pregnant uterus, neural-therapeutic injections are also given into

the → (T) thyroid, in order to achieve emotional and autonomic relaxation.

Abscess Inject around and under the abscess, if possible as soon as it starts. The → inflammation will then rapidly resolve and the abscess will heal. The question is still contested whether local anesthesia may be administered in the inflamed area around an abscess that has softened and needs to be incised. Killian regards this as wrong and recommends the use of a nerve block (conduction anesthesia) away from the site of inflammation. Eriksson takes the view that "the injection of a very small quantity of a local anesthetic by means of a fine needle over the point of the abscess is not only without risk but is often the simplest and best form of anesthetic."

Achalasia Cardiospasm due to disturbed innervation of the mesenteric plexus, hence of the opening function of the distal esophagus.

Therapy upper abdominal → (T) celiac ganglion bilaterally, → (T) epigastrium, → (T) quaddles to abdomen, lower sternum, and back (T7–9 left). Due to disorders of the esophagus, peristaltic injections to the → (T) stellate ganglion. See → abdomen.

Achillodynia, Achillotendinitis The areas around the pressure-sensitive, painful parts of the Achilles tendon are infiltrated and injected with a thin cannula. A firm bandage is applied → tendovaginitis. A partial or complete tear of the Achilles tendon requires surgery!

Acne → skin.

Acrocyanosis → neurocirculatory disturbances, → carpal tunnel syndrome.

Acrodermatitis → skin, → neurocirculatory disturbances.

Acromelalgia → erythromelalgia.

Acroparesthesia → neurocirculatory disturbances, → carpal tunnel syndrome.

Adhesions Post-operative adhesions following appendectomy, cholecystectomy, gastric surgery, gynecological operations etc., are relatively rare and are probably diagnosed far more often than they actually occur. When a disorder persists or recurs after technically perfect surgery, this means all too often that local surgical intervention in the segment was not indicated at all, since an interference field somewhere totally different was in fact responsible for the disturbance at the remote site concerned. Obviously, further surgery at the same site cannot cure such complaints, said to be "due to adhesions"; these can be cured only by removing the cause via a lightning reaction: → post-operative pain.

Adhesions following abdominal surgery are formed because of bacterial or abacterial fibrinous inflammation of the peritoneum when it has been allowed to become dry, or of mechanical, thermal, bacterial, or chemical irritation during surgery. Some people seem to have a tendency to develop adhesions, and there is doubtless a difference in the predisposition as between different individuals in their sensitivity to adhesions and the degree to which they suffer from them. Severe adhesion symptoms may occur with no adhesions present, whilst in other cases quite severe adhesions may be present without producing any symptoms. Siegen has shown that procaine can reverse the pre-morbid stasis in the terminal capillary network (Ricker), which causes exudation of fibrin due to irritation of the peritoneum. For this purpose, it does not matter whether procaine is given locally, or by intravascular, perivascular, or periganglionic injections. When fibrinous adhesions are present, the pain will disappear, the signs of inflammation regress, and the prestasis will change to fibrinolytic hyperemia, which assists the healing process, always provided that this happens before the fibrinous layers have changed into avascular, shrinking scar tissue, which will be much less responsive. Through the early use of procaine treatment in new surgery scars and possibly through the use of → (T) preperitoneal infiltration, we see the chance not only to prevent the formation of interference fields but also keloids and adhesions.

When post-operative symptoms are present, we first infiltrate the → (T) scar and through this down to the peritoneum. Or we set a → (T) quaddle in the area of the dermatome that the patient indicates as being painful or tender and then probe in depth for the painful point, which may be extremely localized, on the parietal peritoneum, and treat it with → (T) preperitoneal infiltration. After several such injections into the painful segment, we can often feel the regression of deep adhesions and cords, even if they have been present for prolonged periods. The patient feels the reactive hyperemia following the injection as a pleasant warmth. Occasionally there may be a transient increase of pain, but this will normally disappear after a day or two and yield to a noticeable improvement in the abdomen or even in the whole of the body. If this should not suffice, segmental therapy will often produce the required result, with injections to the splanchnic nerves (abdominal → (T) celiac ganglion)

or the → (T) pelvic region or → (T) Frankenhauser's ganglia. If our efforts in the segment prove ineffective, we must test every possible interference field before considering further surgery!

Adipositas dolorosa, adiposity → obesity.

Adnexitis → pelvis.

Adrenal insufficiency injections to the splanchnic nerves (→ (T) celiac ganglion) at the upper renal pole. See → (joints) → rheumatism → hormonal disturbances.

Aerophagy It is frequently based on autonomic dysregulation.

Treatment alternating injections to the→ (T) stellate ganglion, → (T) celiac ganglion (see p. 173) and the → (T) epigastrium.

Air embolism Immediate injection of procaine intravenously (→ (T) intravenous procaine injections) and to the → (T) stellate ganglion, → vascular occlusion.

Alcoholism Alcoholism is one of the most important sociomedical and sociopolitical problems of our time. In our environment, 200 out of 10 000 people live with a serious alcohol problem. We do not have enough money and properly trained care takers to look after people with this disorder. According to my own observations, psychiatry (regardless of the method applied) fails to produce satisfying results. B. Dietz found a way to offer successful outpatient care with neural therapy. The treatment is safe, inexpensive, and requires little time investment. Dietz combined → (T) intravenous and → (T) thyroid injections that have a relaxing and reversing effect on the autonomic system. This also decreases the neuro and psychovegetative side-effects of detoxification. In the course of 4 years, 52 patients (nine of them women) received outpatient treatment. The patients were between 20 and 54 years of age and their alcohol habits had lasted between 2 and 20 years. They all expressed the desire to end their alcohol consumption but were not willing to be hospitalized. The psychological guidance by a physician who has experience with the injection techniques is mandatory.

Treatment took place once a week. A conscious effort was made to suggest to the patients that this helps to break the compulsive habit, calms them, and strengthens their willpower. Tranquilizing drugs such as diazepam (Valium) and chlormethiazol were given only when symptoms of incipient delirium were present. In this situation, procaine was injected into the thyroid every other day. Within a few weeks, the autonomic symptoms receded in all patients: first insomnia, followed by tremor, and finally hyperhidrosis. The psychological lability lasted for several months.

In-patient treatment takes generally 4 months. This period served as the rule and 4 months of sobriety was required. Thirty-two patients reached this goal (61.5 %). This result is comparable to the results of common treatment at a specialized psychiatric institution. Now, 10 patients have been "dry" for 1 year, eight patients for more than 2 years. Fifteen had at least one relapse. After verbal encouragement, the treatment started all over again once a week. If the patients felt strong enough to go without injections, the injection intervals were extended. Thirteen patients had been institutionalized once or twice before without success (25 %). Of the 20 patients who were unable to achieve the required 4 abstinent months, 12 relapsed after 1 to 15 months, eight were unable to be abstinent, and 10 discontinued treatment. There were no complications due to the treatment.

Allergies Allergy means to "work differently" or in this specific case to "respond incorrectly." Allergens are a dime a dozen. They are only able to cause an allergic reaction if the regulation ability of the organism is compromised through excessive amounts of chemicals or other first insults. This allows for a sensitization to allergens. We have to try to remove the first insult from the organism's memory at the location of the stimulation. This enables us to normalize the responses of the regulating system and the allergens no longer have an effect on the organism. The daily practice of neural therapy shows proof that this is possible. There is experimental proof for the antihistamine effect of procaine.

The first phase of sensitization is in the main specifically humoral in character, though the autonomic nervous system is also involved. But the "allergic reaction" itself is without doubt largely governed by the nervous system, and the disturbance in the neurovegetative system can be reversed by a neural-therapeutic thrust into the system at the correct point. H. Siegen has demonstrated this in extremely instructive animal experiments. He injected rabbits intracutaneously with 0.5 mL of a filtrate of certain bacterial strains (*E. coli*). The result was merely a transient local reaction. An injection of the same filtrate given 24 hours later into the auricular vein produced a violent response at the site of the primary injection, followed by necrosis. Within a few hours whole sections of skin and subcutaneous tissue were sloughed off (Shwartzman-Sanarelli phenomenon). Hirsch, Keil, Muschaweck, Rade-

macher, and Siegen demonstrated that this deleterious allergic tissue shock can be prevented by infiltration of the primary injection site with procaine, even if this is done only a few seconds before the second intravenous injection of the filtrate, which would normally produce the shock reaction. This complete blocking of any allergic reaction in animal experiments is not possible with any other method and seems to prove that the true trigger factor causing allergic shock does not rely on an antigen–antibody reaction but that, in this case, processes are at work that are controlled by the nervous system and that we can regulate by injecting a repolarizing substance such as procaine.

Treatment In patients with allergies, particularly if diagnosed with paragroup allergy, conjunctiva and intracutaneous tests have to be done (mainly for liability reasons) before every procaine treatment. This precaution rules out (extremely rare!) procaine intolerance. If both tests are clearly positive, lidocaine (Xylocaine), prilocaine (Xylonest), or mepivacaine (Scandicaine) have to be used instead. Enclosed in ampuls, these substances could also contain preservatives with a paragroup. Ampoules with these additives need to be avoided or pre-testing should be done (see Chapter 5, Part III on procaine hypersensitivity). For immediate relief and a reversant effect, → (T) intravenous injections are given. For serum exanthema, the site of the serum injection and the adjacent musculature should be infiltrated (→ (T) intramuscular infiltration). Injections to the → (T) sympathetic chain and the → (T) ganglia are particularly effective. In chronic cases, search for the interference field, → asthma, → skin, → nose (hay fever). See also Case History 10, Part I, Section C, Chapter 2. In the section on the teeth as an interference field in Part I, a case of trigeminal neuralgia is reported as an "alcohol allergy." In this, correction of a false bite eliminated not only the neuralgia but also the abnormal reactive state of the patient that had produced the symptoms of an "allergy."

Hormonal allergy → mastodynia, food allergy: → colitis.

Alopecia (alopecia areata et diffusa) The loss of hair is often a sign of a secondary disorder or an accessory symptom of some other disease. The point of departure is frequently provided by a detailed case history. There can be little doubt that there are also hereditary, racial, and hormonal factors that play their part in baldness, but the fact that father and son are bald is not in itself proof of a hereditary disorder. Practice shows that loss of hair is in most cases caused by an interference field. Why should not a tendency to tonsillitis or dental granuloma be due to hereditary factors? Why then should not the scalp be affected, if only secondarily but all the more easily, if it represents a point of maximum reaction? We know of families where a weak stomach, an easily irritated gallbladder, or migraine occurs remarkably frequently, not as a hereditary disorder but due to a hereditary organic weakness.

An attempt to treat this condition is always justified. Age plays no part in the decision. The results obtained by Dr. Aslan showed that elderly people treated with procaine often grew new hair, and dark hair at that! We know that one of the products into which procaine breaks down is p-aminobenzoic acid and that this acts as a substance that promotes hair growth and contains a factor that prevents hair turning gray. Aslan demonstrated that unsplit procaine is even more effective in this sense. The treatment demands patience and endurance and should start at the beginning of the disease

Therapy Procaine injections about once a week intravenously (→ (T) intravenous procaine injections) and under the affected scalp and, in the event of total baldness, the injections should be distributed over the whole of the head. They may be supplemented by injections into the → (T) stellate ganglion. If the thyroid is enlarged or where hyperfunction is suspected, try injections into the → (T) thyroid. A few treatments can stop the increased hair loss that is caused by stress-based nervousness and shows signs of autonomic hyperexcitability. If these fail to produce results, find the interference field. In searching for this, the tonsils, paranasal sinuses, and teeth should always be regarded as prime suspects. An intelligent patient can state, by comparing the effects of various test injections, when the correct site has been found.

Amaurosis → blindness.

Amenorrhea If of diencephalic or pituitary origin, → (T) intravenous injections, in addition to injections under the → (T) scalp, into the adenoids (→ (T) pharyngeal tonsil) and the → (T) stellate ganglion. All other types: → pelvis. Amenorrhea may also be due to hypofunction of the → thyroid.

Amputation-stump pains Injections into the → (T) scar and the site of the former drain. If these do not suffice, try further injections to the bone stump and especially into the nerve stumps. For this treatment, an assistant must fix the amputation stump. In arm amputations, also inject the homolateral → (T) stellate ganglion and the brachial plexus (→ (T) nerves [afferent]) and into the → (T) subclavian or brachial artery. The intra- and para-arterial injections produce a pleasant sense of warmth in the patient. In

leg amputations, also inject to the lumbar → (T) sympathetic chain or into the → (T) sciatic plexus and into and around the → (T) femoral artery and the → (T) femoral nerve laterally of this (see Fig. 3.**17**). If segmental treatment fails, the search for an interference field may produce the culprit: it is perfectly possible that the pain will disappear after an injection into the → (T) tonsils or into a scar, though it could not be influenced from the segment. In such cases, the amputation has had a trigger effect and has allowed a latent interference field to manifest itself. See → phantom-limb pains.

Amyotrophic lateral sclerosis → lateral sclerosis, amyotrophic.

Anal disorders Includes anal eczema, cracks, fissures, and itching, proctitis, deep-seated lumbago. Treatment with intracutaneous and subcutaneous injections of a local anesthetic is painful but extremely effective. Before injection, the external sphincter should be palpated thoroughly with the well-lubricated forefinger. Old cracks, fissures, and internal or external hemorrhoids can show as locally circumscribed painful or tender areas when pressed or stretched. Only these points are then located and anesthetized with a fine needle to a depth of 20–30 mm. The treatment is repeated if there is a recurrence of the complaint. If the condition has persisted for some time, several treatment sessions will be necessary, and treatment should not be stopped too soon! In fresh fissures, dilate the sphincter under light anesthesia and infiltrate with a very fine needle under the fissures. If necessary, injections to the → pudendal nerve or → (T) epidural anesthesia and infiltration of the region around the tip of the coccyx (ganglion impar) may also be necessary.

Anaphylactic shock → shock, → allergies, → Table 3.**2**, Chapter 6, Part III.

Anemia → blood picture changes.

Angiitis obliterans → neurocirculatory disturbances.

Angina pectoris → heart, → migraine, cervical.

Angioneurosis → neurocirculatory disturbances

Angioneurotic edema This disorder is of vasomotor origin. First try a few → (T) intravenous injections. If these are ineffective, inject the → (T) stellate ganglion. If after several treatments the disorder is not cured, find the interference field. See → edema, → mastodynia (in hormonal allergy).

Angiospastic dysbasia → neurocirculatory disturbances, → sciatica (post-sciatic circulatory disturbances).

Ankle edema → edema.

Anorgasmy Preperitoneal infiltrations of 1 mL procaine or lidocaine bilaterally halfway between symphysis and upper anterior iliac spine (Mink). See →, gynecological dysfunction, autonomic, → sexual disturbances, → (T) femoral artery, → (T) pudendal nerve.

Anosmia → nose.

Anoxia, anoxemia (e.g., CO poisoning): 1 mL procaine or equivalent intravenously (→ (T) intravenous procaine injections) and injections to the → (T) carotid artery every half-hour, in life-threatening emergencies carefully at shorter intervals.

Anterior tibial compartment syndrome The tibialis anterior muscle can swell after overexertion ("march gangrene") and compress the anterior tibial artery in the narrow anterior tibialis compartment. The acute arterial circulation disorder causes intense pain, ischemia, edema, and necroses, which increase the pain. An induration of the muscle tissue takes place and the deep peroneal nerve suffers a secondary paralysis. The symptoms are: pain in the area of the lower leg extensors and the top of the foot, redness, swelling, and hypoesthesia of the first and second toe.

Therapy Infiltration at the back of the knee and the painful areas. Injections in and to the tibial, femoral, and anterior tibial → (T) artery, which travels distally on the anterior crural interosseal membrane (between the tibialis anterior and the extensor digitorum muscles). See also → vascular occlusion, → edema.

Anuria, anuresis In addition to → (T) intravenous injections, also inject 2–5 mL of procaine to the abdominal → (T) celiac ganglion. The constriction of the glomerular vessels that causes anuria is relaxed. If a calculus is causing the constriction, the mucosal swelling will regress. See also → kidneys, → eclampsia (in eclamptic anuria), → urine, retention of.

Anxiety, state of: Try injections intravenously (→ (T) intravenous procaine injections) and into the → (T) thyroid.

Aorta Treatment as → heart. As a rule, syphilitic aortitis responds very well to standard treatment with 1 mL procaine intravenously (→ (T) intravenous pro-

caine injections) and a few → (T) quaddles bilaterally of the edges of the sternum. The scar, of course, remains but the accompanying inflammation causing the painful symptoms heals.

Aphasia → stroke.

Apoplexy → stroke.

Appendicitis Inflammation of the vermiform appendix is due to changes in the terminal capillary vessels of the appendix, for which the stimulus generally lies outside the appendix itself. In our view, therefore, appendicitis is merely another locally circumscribed partial manifestation of a pathological disturbance of the whole of the autonomic system.

According to statistics, the percentage of patients who undergo appendectomy in Germany is three times greater than in the United States, and twice that of Sweden and Great Britain. This suggests very different attitudes from country to country as to when surgery is indicated. If reports are to be believed, Chinese traditional medicine successfully treats even an acute appendix by acupuncture and the oral administration of a plant extract.

In normal circumstances, when a patient presents with an acute appendix or when one cannot be absolutely certain that he or she is not suffering from acute appendicitis, one ought to leave the surgeon to deal with it and refrain from using neural therapy for diagnosis or treatment. But I must nevertheless refer to the potential of our therapy, for the sake of comprehensiveness and for use in exceptional circumstances when lives could be saved, for example, at sea, during expeditions, in remote ski lodges, and such. Neural therapists always carry disposable syringes, cannulas, and procaine because, in emergency situations, it frequently proves to be extremely valuable.

Therapy In chronic and subacute appendicitis, we inject into the right abdominal → (T) celiac plexus and set one to three → (T) quaddles over McBurney's point, passing through these whilst slowly infiltrating from 1–2 mL procaine down to the peritoneum. In such cases, the peritoneum is always irritated and painful. In addition, we also set a quaddle to the right and left of the appendix point known to acupuncture. This is inferior to the knee on the anterior tibial muscle, about two to three fingers' breadths caudally from the angle formed by tibia and fibula (Bischko). This point is then always clearly palpable as a hyperalgetic point and is a useful diagnostic indicator. It is more accurate to locate this point with an instrument that measures skin resistance and set a quaddle exactly to the right and left of the point. After that, each quaddle should be infiltrated to a depth of 0.5–1 cm. In the hands of an experienced neural therapist, this method, in combination with fasting and colonic irrigation, has proved effective in patients who refused surgery and especially in appendicitis in the elderly, where the prognosis is so often unfavorable.

A warning must, however, be given here against random injections by the inexperienced and the irresponsible. Our injections support the self-healing process. In a chronic or subacute appendicitis, we can cause the inflammation to regress. But if there is a suppurative focus with incipient necrotic softening already present, a spontaneous cure would consist in perforation of the appendix. We have to consider, therefore, how long we may continue with conservative treatment and when, particularly in the acute stage, we must refer the patient to the surgeon. The following rule of thumb applies: wherever the application of heat is contraindicated (acute appendicitis, gallbladder empyema), we refrain from segmental treatment. Chronically recurrent appendicitis occasionally proves to be an interference field for other disorders. Tests for this are made at McBurney's point as described above. If this produces a lightning reaction in accordance with the rules, we ask a surgeon to remove the interference field (see Case History 11, Part I, Section C, Chapter 2).

Bykow and Kurzin have pointed out the intimate link between gastric ulcer and appendix, and this is significant for us: "According to the results obtained by I.I. Grekov in 1923, appendicitis was found in all the cases of gastric ulcer seen" (Bykow, Kurzin). We might add: "or an appendectomy scar acting as an interference field." This tells us that whenever we are presented with a gastric ulcer, the region of the appendix and the appendectomy scar should always be tested at the same time.

Arm pain → neuralgia, → neurocirculatory disturbances, → phantom-limb pain, → scalene syndrome.

Arrhythmia, cardiac → heart. During pre-operative preparation, the administration of a prophylactic dose of 1 mL procaine solution intravenously has proved extremely valuable in preventing the risk of cardiac arrhythmia!

Arteriosclerosis The salts of p-aminobenzoic acid, one of the two breakdown products of procaine, can help to dissolve certain compounds that are normally difficult to dissolve, including cholesterol. This may help to explain the beneficial effect of procaine in the treatment of→ geriatric disorders. We also know that procaine given intravenously (→ (T) intravenous procaine injections) increases capil-

lary wall impermeability and dilates the blood vessels.

Arteritis, temporal Characteristic symptoms are severe headaches in the evening and at night, accompanied by fever, debility, and visual disturbances. The temporal arteries are thickened unilaterally or bilaterally, and the skin over them is discolored bluish-red and swollen.

Treatment Usually, careful infiltration of procaine is beneficial, possibly injection to the stellate ganglion. In the head and neck region, hasty injection of large amounts and with great pressure has to be avoided at all times! The superficial temporal → (T) artery is merely a marginal branch of the carotid artery. However, large amounts that are injected with great pressure can end up in the carotid system due to a backlog in the vessel. This can result in complications, which is also the case with the facial and occipital artery.

Arthralgia, arthritis, arthropathy (acute or chronic; of rheumatic, infectious or of other origin): → joints.

Arthrosis of the shoulder → joints.

Articular rheumatism → rheumatism.

Ascites If due to cardiac insufficiency: → heart. In cirrhosis of the liver, try injections to the abdominal → (T) celiac ganglion.

Asthma, bronchial → lungs.

Asthma, cardiac → heart.

Athlete's foot → mycosis, → skin.

Atony, intestinal → intestinal atony.

Atrophic rhinitis → nose.

Atrophy due to disuse → disuse atrophy.

Autologuous blood → Derived from organism of the same individual.

Auriculotemporal nerve → neuralgia.

Autonomic dysregulation → neurovegetative dystonia.

Autonomic gynecological dysfunction → gynecological dysfunction, autonomic.

B

Backache → (Baastrup's) kissing spine syndrome, → lumbago, → spondylolisthesis. According to Martius, backache in women is a "universal gynecological symptom." In disorders of the pubic region we often find a painful dorsal zone above the upper sacrum, with pain extending as far as the area of the dorsal iliac crest. Painful adnexitis can radiate into the area of the dorsal iliac crest. Symptoms that are detected through palpation, such as pain on moving the cervix, or pressure sensitivity of the posterior symphysis and lateral pelvic wall, are not necessarily caused by inflammation. More likely they are the result of autonomic dysregulation (→ gynecological dysfunction, autonomic) with circulatory problems and hyperalgesia. In this case, the uterosacral ligaments can also be contracted and cause backache (pelvic congestion). We can practically guarantee that we can relieve backache of pelvic origin at once by an injection into the → (T) pelvic region and by this means solve the problem quickly and permanently.

Not every pain in the back needs to be a spondylosis or even damage to an → intervertebral disk, despite the fact that an x-ray, that snapshot recording a single moment of the living organism, may permit such a diagnostic interpretation. Only the function matters, and far more important than any diagnosis with the fatal rider "incurable" is the cure that we can generally provide, especially in the case of a backache, irrespective of its origin and cause (except for cancer and advanced tuberculosis), either via the segment or by means of the lightning reaction. For unilateral backache, see → sciatica, → psoas syndrome.

Balance, loss of → disequilibrium, → vertigo.

Baldness → alopecia.

Basedow disease → thyrotoxicosis.

Bechterew disease → spondylitis, rheumatoid.

Bedwetting → enuresis nocturna.

Bell palsy → paralysis, facial.

Bing–Horton syndrome → erythroprosopalgia.

Bladder, disorders of → cystitis. In urinary incontinence in women, parametrial hypertonus, benign ulceration of the bladder, use procaine injections into the → (T) pelvic region, → (T) Frankenhauser's ganglia, also intravesically. See also → prostate, → bladder, irritable, posterior → (T) sacral foramina, → (T) presacral infiltration.

Bladder, irritable This is generally seen in women about the time of the menopause, usually in conjunction with other autonomic disorders, such as hyperhidrosis, dermographism etc. At night and during the period there are usually no symptoms. In the morning, there is distressing urgency and dysuria with a terminal burning sensation, which can become exacerbated during the day. Sometimes, in addition, there is also relative bladder incontinence. Urinalysis is negative and cystoscopy also yields no result, except for a slightly more prominent vascular pattern in the trigone. When taking the case history, the practitioner has to ask about stressors, gynecologic surgeries, resections of the prostate, hormonal disorders, the intake of psycho-pharmaca, laxatives, spasmolytics, oral contraceptives, etc. All these factors may effect the motility of the muscular portion in the urinary tract.

Treatment There is objective proof that the prostate capsule and, in the case of women, the vesicoureteral orifice are sources of afferent noxious stimuli leading to bladder function disorders. The physiological interplay between bladder filling and bladder emptying is disturbed. Through anesthesia of the proper receptors, the function can be normalized. We first try the injections to → (T) Frankenhauser's ganglia, described in → pelvis, because these affect the hormonal processes. Further, anesthesia of the neck of the bladder may also be use- ful. For this, we insert a vaginal speculum to visualize the anterior vaginal wall and, using a thin 60 mm-long needle, we insert this about 20 mm behind the urethral opening and infiltrate the loose connective tissue between bladder and vagina fanwise with 3–5 mL. To stop bleeding on the way home, a tampon is inserted in the anterior third of the vagina. Objective proof by urodynamic methods of the success of this para-ure-

thral infiltration has been provided by Spernol and Riss.

The neck of the bladder can also be reached by entering from above through the abdominal wall behind the symphysis. To reduce hypertonicity of the sympathetic system and the spasms due to the nervous hyperexcitability of the bladder, injections into the → (T) thyroid may also help. → (T) Quaddles over the bladder and the sacrum as far as L1 are also indicated, priority always being given to hyperalgetic points.

In the case of irritable bladder in men: injections to or into the → (T) prostate capsule in addition to the above-mentioned quaddles. → (T) Presacral or → (T) epidural infiltration will be necessary only in stubborn cases. See also → enuresis → kidneys, → cystitis, → (T) sacral foramina.

Blindness Transitory or toxic amaurosis, e.g., after the administration of streptomycin or arsenic and following convulsions (→ eclampsia), is treated as follows. For immediate relief and as basic treatment, 1 mL procaine intravenously (→ (T) intravenous procaine injections) to eliminate the vascular spasms, repeated half-hourly if necessary, plus injections into the stellate or → (T) ciliary ganglion, or injections to (not into!) the → (T) carotid artery. See also → eye disease.

Blood picture changes The sites where blood is formed and their regulating centers are non-autonomous parts of the whole and like any other organ can be inhibited by interference fields from functioning properly. As a result they can become inefficient. Pischinger was the first to provide objective evidence of the Huneke phenomenon by proving that all changes in the blood picture caused by interference fields rapidly return to normal as soon as the interference field is eliminated, since the cause acting as trigger within the basic autonomic system is eliminated at the same time. Fleischhacker also reported on the surprising success of neural therapy according to Huneke in disorders of the myeloid system.

Anemia with a reduced serum iron level, which does not respond to the oral administration of iron, is as a rule due to an interference field. Stacher was able to show that erythropoiesis can be inhibited by interference-field influence in aplastic anemia and panmyelopathy. As a rule, a substantial improvement or complete cure is quickly obtained as soon as the interference field has been found and eliminated. Elsewhere, Stacher states that the elimination of the interference field responsible produced normalization of the blood picture in more than 70% of all cases of granulocytopenia of unknown origin. Of 12 cases of panmyelopathy, dental treatment alone produced complete normalization in six of the patients.

According to Boehnel, many cases of anemia and leukopenia can be cured by the elimination of interference fields. Some cases of leukemia also respond favorably. When the interference field was eliminated, anti-leukemic therapy became effective although there had been no improvement before. In leukemia, where the spleen is substantially affected by tumor or where it is infarcted etc., splanchnic or → (T) celiac ganglion anesthesia on the left side brings pain relief. Boehnel states "All this again suggests that a focus or an interference field is producing an environmental change that substantially influences the pathological process and the way the disease will respond to therapy."

Stacher reports the following case. When treatment of a panmyelopathy with blood transfusions, corticosteroids etc. had failed to produce results, bone-marrow damage due to an interference field was suspected and it was decided to carry out a focus provocation. In addition to a reaction in two teeth, there was a temporary deterioration in the blood picture. Following extraction of the two teeth, there was at first a substantial temporary drop in the leukocyte count. This was followed by a sharp and excessive rise and finally by a return to a normal blood and bone-marrow picture. This has now persisted over 3 years.

After subcutaneous and intramuscular (but less so after intravenous) administration of procaine, Joachimovits found an increase of monocytes, histiocytes, and mast cells, as an expression of its stimulating effect on basic tissue.

In acupuncture, point BL-39 is known as the "principal point for erythropoiesis." It is said that when a needle is inserted at this point there is a rapid increase in the erythrocyte count by as much as a million (Bischko). On account of the risk of collapse, the patient must always be lying down when the needle is inserted. He or she bends his or her back with the shoulders held forward, so that the scapula clears the entry point where the shoulder blade and the upper edge of the fourth rib intersect.

The Bucarest Institute for Geriatrics, which propagates Novocaine therapy according to Aslan, found the following improvement in the blood picture to be a regularly repeatable result of this treatment: reduction in the increased leukocyte count, increase in granulocytes and monocytes, increased globulin values. However, one ought not to lose sight of the fact that, generally, after parenteral procaine treatment, the leukocyte count increases by 1000–3000 for 2–3 days.

Blood pressure (high) → hypertension.

Blood supply, disturbed → neurocirculatory disturbances.

Boils → furuncles.

Bone fractures → fractures.

Brachialgia → neuritis of the brachial plexus.

Brain injury → cerebral injury.

Brain tumor → cerebral tumor.

Breathlessness → heart, → lungs (depending on origin).

Bronchial asthma, bronchiectasis, bronchitis → asthma, bronchial, → lungs.

Bruises → hematoma, → injuries.

Bullous eruptions → skin.

Bunion, inflammation of → hallux valgus.

Burns Prophylactic measures against → shock by repeated → (T) intravenous injections. These also act to relieve pain, reduce vascular permeability, and help to lower the patient's temperature. Small areas are infiltrated around and under the burn. In severe cases, we treat shock and the reactive inflammatory symptoms such as → edema, lymphorrhea, and hemoconcentration by injections to the abdominal → (T) celiac ganglion and/or the → (T) stellate ganglion. The healing process is visibly hastened when this treatment is repeated.

Bursitis In prepatellar or olecranon bursitis, replace about a fifth of the quantity of fluid removed by paracentesis with physiological saline solution and 1 mL procaine into the bursa. This will at first produce a small irritant effusion, but with hardly any pain. On repetition, a soft pad is formed that assumes the protective function of the mucous bursa. In subdeltoid or subacromial bursitis, insert the needle medially through the deltoid muscle from the center of a line running from the tip of the acromion to the greater tuberosity of the humerus, using a 35 mm-long 0.7 mm diameter needle. If effusion fluid is aspirated, the needle is correctly placed. Aspirate the liquid and inject 1 mL procaine solution.

C

Calcaneal apophysitis Exostosis of the calcaneus at the Achilles tendon attachment with painful swelling of the soft tissue.

Therapy Repeated infiltration of the painful tissue every 2–3 days.

Calcaneal spur Infiltrate the local hyperalgetic points on both sides of the calcaneus and through them into the vicinity of the calcaneal spur (not through the sole of the foot!). In stubborn cases, inject into the homolateral → (T) sacroiliac joint. If these are not effective, find the interference field. See also → periosteum.

Calf, pains in → sciatica. In case of cramp, → (T) quaddles over the center of the calf and injections to a depth of 30–40 mm, and laterally of the tibia over the anterior tibial muscle (→ anterior tibial compartment syndrome). Try → (T) epidural (caudal) anesthesias, → (T) presacral infiltration or injections to and into the → (T) femoral artery.

Callus formation, inadequate Normal callus formation depends on a correctly functioning nervous system. Animal experiments have proved that a → fracture heals more quickly if procaine is injected as closely as possible to or into the fracture site. Evidently, the repolarization effected by the procaine eliminates any dysregulation that would delay normal callus formation. An injection into the → (T) afferent arteries and nerves will generally be adequate to normalize the disturbed neural and blood supply. If this fails, injections to the relevant → (T) sympathetic chain and its → (T) ganglia may be necessary.

Cancer In English, we speak of cancer. The French, more accurately, use the plural form "les cancers," to show that a number of similar diseases are grouped under this collective term. Cancer is not curable by neural therapy alone! But the fight against the pain produced by cancer is a grateful field for our form of treatment, which enables us to cut down on opiates and sometimes even to replace them altogether (Krecke). We can reduce every form of → inflammation by means of procaine. We believe that the same means makes it possible to eliminate the inflammatory protective wall with which the organism surrounds any malignant tumor. This surrounding inflammation is reduced by injection to and even into the tumor and the → (T) nerves (afferent) and → (T) afferent arteries, the pain abates, and the tumor not infrequently becomes noticeably smaller, for example, with → ileus. Consequently, the pressure exerted on nerves, and on blood and lymphatic vessels, with its resulting congestion and pain, is eliminated or at least reduced. Unfortunately we are unable to stop the inevitable progress of the disease, but we can at least slow it down and provide relief.

Treatment will depend on the site of the tumor. It is given within the relevant segment, in accordance with the usual methods of segmental therapy, i.e., in cancer of the stomach the injections are given into the → (T) celiac ganglion at the upper pole of the kidney and into the → (T) epigastrium; in lower abdominal cancer they will be administered into the → (T) pelvic region and intramurally (→ (T) intramural) into the uterus; in bone metastases to the adjacent periosteum; in inoperable genital carcinoma we treat the patient by → (T) epidural anesthesia etc.

On account of the sensitivity of cancer patients to irritative stimuli, Schlitter recommends increasing their resistance by the subcutaneous—probably, better still, intracutaneous—administration of minute quantities of procaine (0.1 mL, 0.5 mL, 1 mL) into the left dorsal dermatome of the spleen (L6 through L8) and to keep strictly to intervals of 4 weeks between treatments, in order to allow the irritation to abate and prevent it from becoming too intensive by summation. The effect can be shown objectively by an increase in the absolute lymphocyte count and is explained by an immunobiological stimulation of the spleen.

The view that the conclusions on interference fields, as taught in neural therapy according to Huneke, have a useful contribution to make to the theory on the causes of cancer and, in particular, to cancer therapy is briefly sketched below.

In our era of industrial civilization, science and technology have placed humankind in an unnatural environment, which acts as an overstimulation and thus endangers life. Humankind has to adapt to this whether it likes it or not. If it fails to do so, it be-

comes liable to the so-called civilization disorders, one of which is cancer. Cancer only manifests itself to us as a local disorder. But there can now be little doubt that it is merely the end result of an illness that affects the whole organism. Cancer begins in a cell with non-specific genetic function, which is not recognized, destroyed, or otherwise eliminated by a weakened immune system. It may have become blocked and reacts too slowly due to organic or psychological interference fields. In our view, an illness occurs only when the entire organism or, more precisely, the basic autonomic system permits it, and this applies to this disease above all others. Cancer, like any other illness, becomes manifest only when the regulating mechanisms, the body's defensive system and its spontaneous healing powers become overloaded and are blocked by too many and excessive noxious stimuli, which the basic autonomic system can no longer cope with, for which it is no longer able to maintain the supply of the bioelectrical power needed by the many different vital functions in order to operate smoothly.

Statistics show that one out of eight smokers and only one out of 220 non-smokers dies of lung cancer. There is no question about the carcinogenic effect of smoking on the lungs. But the mere search for ever more substances that might cause cancer does not help us to solve the problem. We need to find an answer to the question why the other seven smokers do not die and the 220th non-smoker does die of lung cancer. The search for the cause of cancer has to include the question why does a cancer patient respond to smoking the way he or she does? This would inevitably lead to the issue of the cancer-promoting effects of interference fields, which enable risk factors to turn pathogenic.

In 1938, at the Robert Koch Institute in Berlin, P.G. Seeger discovered that a disease, including cancer, takes place in a cell only if the enzyme cytochrome c oxidase (cytochrome a_3) has lost its tension. Every stimulus causes the electrical cell potential to drop, and the amount and duration of this reduced potential will vary according to the strength and duration of the irritative stimulus causing this reduction. The cell's electrical potential is maintained at its proper level by normal cellular respiration. Any unphysiological stimulus that is too strong or persists too long causes depolarization or lowers the resting membrane potential over a fairly lengthy period and becomes pathogenic. The cell is thus left unprotected and at risk. Cell metabolism depends on the permeability of the cell membrane. This is selective and varies constantly with the bioelectrical charge in the membrane. The absorption of oxygen is linked to a certain level of this electrical potential. All carcinogenic substances and these other factors inhibit cellular respiration. Consequently, the electrical potential drops further and permeability is further reduced.

Once the effect of this interactive process exceeds the limits of tolerance, cell fermentation begins in the anoxic cell and prepares the way for cancer formation. H. Lamers pointed out that the cytochrome c oxidase and procaine share the same redox potential of 290 mV. He also indicated that procaine is able to repolarize and stabilize the enzyme that plays such an important part in the development of cancer. As cellular respiration (and the electrical potential) is reduced even more, the cancer cells become more virulent (Seeger). With progressive lowering of electric potential the cell respiration worsens. It is ultimately no longer monitored by the autonomic control system and absconds from the totality of information.

According to this, therefore, the problem of cancer is one of microbiological energy! Cell electrophoresis shows that cancer cells do, in fact, have a reduced membrane potential. Cancer cells migrate faster than normal cells, and the speed of their migration increases as the cell's electrical potential decreases. Thus, the charge level of the cell membrane of a cancer cell is actually less than that of a healthy cell. Cone, Jr. stated that the constant proliferation of tumor cells could be due to permanent electrical depolarization. In cell cultures, maximum mitosis occurs when the cell-membrane potential drops below –10 mV. When the potential is at –70 mV or more, pathological mitosis does not occur. Measurements made on rapidly dividing myosarcoma cells showed them to have a cell-membrane potential of only –10 mV, whilst that of the neighboring healthy muscle cells with normal mitotic activity was found to be –90 mV. As the cause for the reduced electrical potential of the membrane in malignancy, Cone mentions a basic functional change in the molecular structure and in the specific characteristics of the cell surface, which, in turn, is due to a functional disturbance of the metabolic processes whose task is the synthesis and the stereochemical structure of the cell-surface polymers. These observations confirm in practical terms what has been stated up to this point.

This is how matters look from the viewpoint of the cell. But the cell does not exist in isolation; its life is as much for the sake of the entire organism as it is made possible by it. The neurovegetative system links every cell to the same living organism, which it is, in the final analysis, the cell's sole function to serve. Via the basic autonomic system, the cell receives and sends out its directing and informative impulses. In our view, the cell is the reacting organ of the autonomic fibril. Provided there is an

adequate oxygen supply, cell respiration is assured only if the neurovegetative monitoring and control system is intact, and the cell remains safe from cancerous degeneration into destructive autonomy only as long as these conditions are fulfilled.

Consequently, cancer therapy has to eliminate the interference fields or the excessive segmental irritative stimuli that are blocking the organ responsible for the transmission of information, namely the neurovegetative system, and to make it capable once again of functioning efficiently. This is the only way in which the blockage, present in every tumor patient, of the body's regulating and defensive functions can be broken or eliminated! To date, the significance of the interference field as an important factor favoring tumor formation and growth has been left practically disregarded. Yet, it is easy enough to imagine that (and to what extent) an interference constantly and negatively influences the cell environment (Pischinger). This includes a pH shift in the extracellular space towards the acid side, whilst alkalosis occurs in the blood. This process finally reaches the point where the previously damaged and cancer-susceptible cell escapes from neurovegetative control, and now the "oncogenic agent" can modify the molecules of nucleic acid and transform the out-of-control cell into a proliferating tumor cell.

If this theory (Dosch, Seeger, Varro) is correct or at least possible, it would lead to the following conclusions. Today, the battle against cancer is largely based on surgery, irradiation, and cytostatic drugs. But these cannot break the blockage of the neurovegetative system. On the contrary, they reinforce it all the more! Surgery, radiation treatment, chemotherapy, and immunobiological aftercare make sense only if they also substantially reactivate the body's own defenses. Of the biological methods now available to us, the reversal and normalization of the basic autonomic functions by skilled neural therapy according to Huneke must, therefore, have first priority. This therapy can normalize the entire electrical power grid by recharging the cells up to their normal electrical potential and protecting the cell membrane against renewed loss of this potential. This happens when neural interference fields and segmental blocks are eliminated by correctly sited injections of procaine. Only when this vital energy balance has been restored in every part of the whole, can the system as a whole again regulate itself and remain at the correct state of dynamic equilibrium for maintaining the dynamic flow that the overall information system has specified. At that point, the problem of reintegrating the cancer cell in the general energy-supply network and of providing it with vital oxygen is no longer insoluble.

Varro has demonstrated with striking early results that a combination of neural therapy, by which disturbances in the neurovegetative system are eliminated and normality restored, with ozone therapy is in many cases perfectly capable of arresting the pathological processes involved in the formation of cancer and of making them largely reversible. Other general measures, such as detoxication of the system by changing to a healthier diet, restoring the intestinal flora to a healthy state, desensitization, and other means of activating the body's defensive capabilities have a supporting part to play in this.

Werkmeister has reported that irradiated tissue remains disturbed in its function to the end of the patient's life. Under local procaine → (T) quaddle therapy, radiation treatment was found to be more effective in dealing with tumors, at lower radiation doses, whilst the adjacent areas that were also irradiated were more effectively shielded. Further, the other unpleasant side-effects of radiation therapy were reduced or completely absent. Telangiectasis did not occur to the same extent in areas protected by quaddles, and any that was already present regressed considerably when the treatment was repeated a sufficient number of times. Effective prophylaxis against ulceration was thus achieved. Werkmeister also confirmed that interference fields have an unfavorable effect on the pathological processes of cancer. This report is supported by Singh who found that procaine (and iodine compounds) stops the DNS repair activity within the cell nucleus and that this effect probably also increases the sensitivity of malignant tumors to radiation therapy. Whilst cancer cannot be cured by neural therapy alone, it is therefore probable that a significant road to its cure leads via a restoration to health of the entire regulating mechanism, including the basic autonomic system, by means of the Huneke therapy. See also → radiation damage.

Capsular arthritis → joints.

Carbon monoxide poisoning → anoxemia.

Carbuncles Infiltrate generously around as early as possible to provide rapid freedom from pain, localize necrotic areas, and promote speedy healing. As carbuncle scars are often found to act as interference fields, this is also the best prophylactic treatment against their becoming interference fields. See also →abscess, → furuncles.

Carcinoma → cancer.

Cardiac disorders, asthma, edema → heart.

Cardiac rhythm, disturbances of → heart.

Cardiospasm → abdomen, → achalasia.

Carotodynia → neuralgia of the carotid plexus.

Carpal tunnel syndrome The median nerve can be disturbed in its sensory and its motor and trophic functions by exostoses, tumors, and inflammation. One of the leading symptoms can be nocturnal brachial paresthesia. Primarily women complain that their hands fall asleep at night and it feels as if their fingers were extremely swollen. Only the pinky finger is spared. Hyperalgesias indicate a pseudoradicular condition and hypoalgesias a radicular lesion. In diffuse sensation disorders, polyneuropathy should be considered. The bilateral carpal tunnel syndrome in the elderly is called "idiopathic" carpal tunnel syndrome. Before attempting surgery, it is worthwhile trying to cure this condition by repeated procaine injections into the carpal tunnel under the transverse carpal ligament where the → (T) median nerve passes through it. For this we use only minute quantities of anesthetic (0.1–0.3 mL), since greater amounts might further damage the compressed nerve by additional pressure. It is even better to inject into the nerve about three fingers' breadths above the interarticular space, before it enters the carpal tunnel. Injections into the → (T) stellate ganglion and the → (T) brachial plexus nerves may also be indicated. If this neural-therapeutic treatment fails to produce results, the carpal tunnel will have to be decompressed surgically.

Cataract → eye disease.

Catarrh of the mucous membranes → mucous membranes, catarrh of.

Catarrh of the upper respiratory tract → (T) nasal spray with an anesthetic for the mucosa.

Causalgia The sharp burning pain, which occurs especially after gunshot wounds with partially severed nerves, is probably due to the transmission of efferent sympathetic activity to afferent nociceptors. As a result, the irritation threshold of the sympathetic system is greatly reduced, first producing vasomotor and later trophic disturbances, which can be triggered by acoustic, optical, or psychological stimuli. The tibial and median nerves and their related segmental tissues are affected particularly frequently. The damp cloth worn by the patient to cover the affected extremity is characteristic of the clinical picture for this affliction, since dampness relieves the pain and dry skin exacerbates it.

Therapy Complete temporary blocking of the sympathetic chain and of the peripheral nerves by means of procaine can progressively reduce the irritation of the sympathetic chain causing the symptoms, each time the treatment is repeated. Our "surgeon's bloodless knife" generally saves the patient from having to undergo sympathectomy or suffering the ravages of chemical nerve destruction. Neurolysis, nerve resection, even mutilating amputation of the extremities, chordotomy, and leukotomy have all proved as ineffective as psychotherapy. Procaine injections, on the other hand, are generally more effective if repeated a sufficient number of times. They cannot harm and are repeatable at any time. In conservative causalgia treatment, the physician's patience and perseverance should not be less than that of the suffering patient. In all cases of pain syndromes after damage to peripheral nerves, neural therapy with local anesthesia has proven to be the most successful and recognized treatment method.

In gunshot wounds, we infiltrate entry and exit scars and all surgical scars as far as the point of nerve contact in the old projectile path. Where the bone has also been injured, we go as far as the periosteum on the bone scar itself and, if possible, also to and into the adjacent → (T) arteries. Nerve contact with the needle produces a defensive reflex movement by the patient, for which both he or she and the physician should be prepared, and an assistant must always fix the extremity:

1. *Upper extremity:* To and into the → (T) brachial artery and plexus (→ (T) nerves), or directly into the radial, ulnar, and especially the → (T) median nerves along their course, and always also into the → (T) stellate ganglion.
2. *Lower extremity:* Injections intra- and periarterially to the → (T) femoral artery and the adjacent → (T) femoral nerve or to the tibial nerve that can be deactivated at the center of the upper thigh or back of the knee. Also → (T) presacral and → (T) epidural infiltrations and always to the → (T) celiac ganglion at the level of L1 through L4, preferably bilaterally on account of the interconnected right and left lumbar splanchnic nerves in the abdominal plexus.

If these combined injections within the segment fail to bring results, we must also remember, even when we treat a causalgia patient, that an interference field may be affecting our chances of success. If an interference field has previously damaged the sympathetic system, it may now be keeping up a constant irritation from beyond the segment. See also → amputation-stump pains, → neurocirculatory disturbances, → phantom-limb pains, → post-traumatic osteoporosis.

Cerebral concussion → concussion, cerebral.

Cerebral edema Every edema has its origin in a dysregulation. Dehydration of the brain and the reduction of intracranial pressure can begin only when the autonomic system resumes its regulating functions. To achieve this, we inject a 2% procaine solution intravenously (→ (T) intravenous procaine injections) (possibly together with 40% glucose and a diuretic) and under the → (T) scalp. Anesthesia of the → (T) stellate ganglion normalizes the endothelial barrier and allows the cerebral edema to drain. See → concussion, cerebral.

Cerebral embolism → stroke, → vascular occlusion.

Cerebral hemorrhage → stroke.

Cerebral injury If the injury is new, procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp will help regulate body temperature and circulation. See also → shock.

Cerebral lues → syphilis, cerebral.

Cerebral sclerosis → geriatric disorders.

Cerebral tumor In inoperable tumors or post-operative headache etc., procaine is injected intravenously (→ (T) intravenous procaine injections), under the → (T) scalp, possibly also to the → (T) stellate ganglion.

Cerebrovascular accident → stroke.

Cervical erosion The condition is generally the result of cervical hypersecretion and is treated with paracervical injections to → (T) Frankenhauser's plexus. The autonomic dysfunction as the origin of the condition can be addressed with injections into the → (T) thyroid. See also → pelvis.

Cervical migraine → migraine, cervical.

Cervical syndrome The cervical spine is the most flexible part of the spine. This makes it prone to degenerative changes and intervertebral lesions. The pathological symptoms that center on the cervical region and that are summarized under the term of "cervical syndrome" are generally based on mechanisms that differ from one another as regards both their etiology and their pathogenesis. Thus, changes in the joints, tendons, and ligaments, muscles, nerves, and vessels, either singly or, more frequently, in combination, can cause similar disorders or symptoms and, further, produce dysfunctions in other systems. Psychological, autonomic, neural, and hormonal components often combine to produce a complex clinical picture in which it is no longer possible to distinguish between cause and effect. More importance is generally attached to the x-ray as a provider of significant information than it really deserves. It merely allows us to exclude from our list of likely causes such disorders as cannot be treated by neural therapy, or at least not by neural therapy alone: vertebral caries, traumatic changes, tumors, hereditary abnormalities, and the like. Evidence of degenerative changes that may have occurred does not mean very much. Morphological changes, even if they are extensive, are no conclusive proof that they are the cause of the symptoms of which the patient complains. The x-ray is merely a diagnostic aid, a tool that must not mislead us or stop us from trying to help the patient with our therapy.

Cervical spondylosis and → osteochondrosis can lead to irritation of the cervical sympathetic system and, by compression of the nerve roots, to radicular neuritis. In addition, the → (T) vertebral artery with its periarterial autonomic fibers is often also irritated. One of the results of this is that perceptible → muscle spasm occurs at some depth in the musculature of the neck and shoulders. Acute disk prolapse in this region is much less frequent.

The upper cervical syndrome produces the following symptoms: pressure pain at the spinous processes of the upper cervical vertebrae and exit point of the → (T) occipital nerves, reflex muscle tension, pain in the neck and the back of the head, occipital neuralgia, cervical migraine, tinnitus, and dizziness (→ vertebral artery compression syndrome).

The middle cervical syndrome causes shoulder pain and may be accompanied by paroxysmal tachycardia and motor dysfunction of the diaphragm. If the pain is not exacerbated when the head is moved, for example, in bending or stretching the neck, inclining the head sideways or rotation, the cervical column can be dismissed from the list of possible causes (periarthritis of the humeroscapular → joint).

The lower cervical syndrome presents the symptoms of pain and fibrositic nodules in the region of neck and shoulders, and of brachialgia or epicondylitis. Pain usually begins in the neck and extends primarily into the lateral part of the shoulders and arms (→ joints, shoulder-arm syndrome). Reflex muscle tension in the shoulder and neck area limits the mobility of the cervical spine. Pain, paresthesias, and even hand muscle atrophies may occur in the hands.

Differential diagnosis of neuralgia or fibrositis Bend the patient's head forward and to the side of the pain.

Nerve pain will be exacerbated by the additional compression, whilst pain due to fibrositic nodules will be attenuated because of the relaxation produced by this movement. The contrary effect is produced when the head is bent forward and to the opposite side: the nerve pain is attenuated by the relief given to the compressed nerve roots, whilst stretching exacerbates the pain due to fibrositis.

Treatment Procaine intravenously (→ (T) intravenous procaine injections), plus → (T) quaddles over the fibrositic nodules found by palpation and over the hyperalgetic points in neck and shoulders. Take the tense muscle between the fingers of the left hand, raise it and infiltrate intramuscularly (→ (T) intramuscular infiltrations) to a depth of 30–40 mm through an intracutaneous → (T) quaddle (beware of intrapulmonary and intra-arterial injections!), then distribute the local anesthetic by circular massaging movements. In addition, inject to the atlas process and the periosteum of percussion-sensitive spinous and lateral processes of the cervical vertebrae. Even more effective are injections to the → (T) nerves (afferent), especially to the → (T) occipital nerves and into the cervical and brachial plexus, and to the → (T) stellate ganglion. The latter will eliminate not only the irritation to the cervical sympathetic system but also one of the factors that may cause osteochondrosis. However, this injection may have to be repeated anything up to 10 times in order to have a genuinely permanent effect. First aid can also be given by blocking the accessory nerve: insert the needle 20 mm below the mastoid process on the dorsal edge of the sternocleidomastoid muscle and infiltrate about 5 mL by slowly advancing the point of the needle into the muscle. As the sternocleidomastoid muscle relaxes, the pain in neck and shoulder disappears. Also try injections into the posterior third of the lower → (T) nasal concha or use a → (T) nasal spray. In therapy-resistant cases, find the interference field. When faced with these symptoms, I always start my search with the tonsils.

Any injury that remains painful longer than would have been expected from the severity of the trauma suggests that in addition to the psyche there may also be an interference field involved. See also → intervertebral disk, damage to.

Cervical-rib syndrome → scalene syndrome.

Cervicitis → pelvis.

Chapped skin → rhagades.

Charlin syndrome → neuralgia of the nasociliar nerve.

Chilblains Infiltrate locally.

Chin If → (T) quaddles over the chin do not suffice, an x-ray of the lower incisors is advisable. Also try injections to the → (T) teeth, especially into the gingival pockets. See also→ (T) mental nerve.

Cholangiolitis, cholangitis, cholecystitis, cholelithiasis → abdomen.

Chorea minor I have cured two cases of this disorder by the Huneke phenomenon via the tonsils. This proves that the cerebral irritation can be due to an interference field. An 11-year old girl was convulsed by spasms to such an extent that she could no longer walk, feed herself, or speak. After a positive tonsil test, she got up perfectly normally, said goodbye quite distinctly and went out through the door without assistance, as though she had never been ill. Parents, doctor, and assistant looked at each other speechlessly, until their surprise found relief in laughter. Such dramatic cures can, of course, be experienced only by someone who can believe that they are possible and who will try to set them in motion. Someone who does not regard him or herself as competent to cure recondite symptoms will never be able to cure them, simply for want of trying. In the case of this girl, incidentally, the same treatment was repeated a fortnight later to eliminate the remainder of the minor spasms that had recurred.

Choreoretinitis, disseminated → eye disease.

Choroidal disorders → eye disease.

Ciliary neuralgia → headache, → neuralgia.

Cillosis → (T) nerve-exit points of the supraorbital nerve.

Circulatory disturbances → neurocirculatory disturbances.

Civilization disorders → neurovegetative dystonia, → cancer.

Claudication, intermittent → neurocirculatory disturbances, → sciatica (post-sciatic circulatory disturbances).

Clouding of the lens → cataract, → eye disease.

Cluster headache (Bing–Horton syndrome) Primarily in the evening or at night, lasting 20–120 minutes, intense unilateral headache with burning pain of the eyes, forehead, temples, and back of the head. Redness and swelling of the affected side of the

head with associated strong pulsation of the temporal artery. Redness of the conjunctiva with lacrimation and rhinorrhea, possibly ptosis and miosis as incomplete Horner syndrome. Intervals often lasting months.

Therapy An attack can be brought on by histamine, which slackens the walls of the vessels and increases the permeability of the capillaries. Procaine is a histamine antagonist and seals the vessels. We administer it intravenously (→ (T) intravenous procaine injections) on the affected side, around and under the → (T) temporal artery, and into all pressure points. In addition, also to the pterygopalatine and → (T) stellate ganglion. For the case of an attack, → (T) nasal spray should be prescribed for the patient, or a superficial anesthetic (2% pantocaine or 4% lidocaine solution), which can be applied with a cotton swab into the nostril of the affected side. See also → migraine, → neuralgia.

Coccygodynia A circumscribed pain and pressure sensitivity in the coccygeal region, which increases after prolonged sitting, when bending down and during defecation. It can be caused by trauma, dislocation of the coccyx, neuralgia of the sacral plexus, prostatitis, or inflammation of the rectum.

Treatment Injections to the periosteum of the coccyx and laterally to the nerve branches and to the ventral area of the coccyx (to the ganglion impar, where the ends of the two sympathetic trunks unite) have proved effective, also into the second to fourth posterior → (T) sacral foramina, → (T) epidural or → (T) presacral infiltrations. If the results are not satisfying, injections to the → (T) pudendal nerve or the → (T) sacral plexus (→ (T) sciatic nerve). Further, injections into the → (T) pelvic region, the → (T) prostate and perianal infiltrations should also be tried, since coccygodynia can also be kept in being by an interference field in the adjacent areas. Old, more or less still painful contusions of the coccyx can act as interference fields and cause remote disturbances years later.

Coccyx, contusion of If one strikes the bottom of a corked bottle sharply with the flat of the hand, the cork may be ejected with some force from the neck of the bottle. In exactly the same manner the sudden surge of fluid in the liquor space provoked by severe contusion of the coccyx can produce → concussion with all its usual consequences, although no direct force has been applied to the head as such.

Cold, common → coryza.

Cold feet → feet, cold.

Cold injury → frostbite, → neurocirculatory disturbances.

Colic → abdomen, → kidneys.

Colitis → abdomen. Ulcerative or mucous colitis (with blood and mucous secretions from the intestines, tenesmus, obstipation, and meteorism) are frequently caused by food → allergies (primarily lactic protein).

Therapy → abdomen. Often, the patient accurately localizes the site of inflammation of his or her intestine or where the spasms occur. He or she should be asked to dig his or her fingernail into the point where they feel the maximum pain inside. The mark left by their fingernail is the site for setting our → (T) quaddle. We then go through this to probe further down to the peritoneum, which is always very pain-sensitive in these cases. If we cannot find an "ouch point" in the place indicated by the patient, we have to use the point of the needle to look for the hyperalgetic peritoneal area (→ (T) preperitoneal infiltration). Without an ouch point there can be no healing reaction! As is always the case with segmental therapy, this treatment should be repeated when the condition recurs. There is absolutely no reason to have any doubts or misgivings about this treatment. With the patient in the recumbent position, the (insensitive) intestine is not normally reached if the correct procedure is followed.

Collapse Procaine intravenously (→ (T) intravenous procaine injections) will reliably regulate circulation and reduce vascular permeability. In animal experiments it is possible to bring about a collapse artificially (Bezold-Jarisch reflex). When procaine is given intravenously, collapse does not occur (Hirsch, Keil, Muschaweck). In sympathicotonic collapse, anesthesia of the → (T) stellate ganglion or the carotid glomus (→ (T) carotid artery) has been found to have a tonic effect on the circulation. See also → shock.

Colon Firstly, exclude carcinoma as a possible cause, then → (T) quaddles over the lower abdomen and coccyx. If this is inadequate, → (T) epidural or → (T) presacral infiltrations, combined with injections at the ventral side of the coccyx. Possibly also injections into the → (T) prostate or the posterior → (T) sacral foramina. See also → anal disorders.

Colon, congenital dilatation of → megacolon.

Colonic spasms → colitis.

Colonopathy → intestinal dysfunctions, → colitis, → abdomen.

Colpitis → pelvis.

Coma, hepatic → abdomen.

Commotio cerebris → concussion, cerebral.

Concentration, lack of → geriatric disorders, → arteriosclerosis, → neurodystonia.

Concussion, cerebral Every cerebral concussion acts like a → shock and causes a pathologic state of excitation in the brain. It is responsible for vessel spasms and paralysis and for increased permeability of the vessel walls, which causes → cerebral edema. The swelling of the brain is the reason for sudden changes in all areas of consciousness, including dizziness, fainting or coma, headache, vertigo, vomiting, sleep disorders, or retrograde amnesia. Usually the symptoms are temporary and go down within 4 days (first degree) or within 3 weeks (second degree). At this point, most patients are able to work again.

Cerebral concussion is the more or less extensive tissue damage of the brain substance, which is anatomically perceivable. In addition to the cerebral concussion symptoms (which can be missing), neural failures of different degrees can be noted. These disorders ease after 3 weeks or later (third degree) and take forms from hyperexcitation to paralysis, aphasia, apraxia, and traumatic → epilepsy. After 10 or more years, late-onset disorders due to slowly progressing degenerative processes may appear, such as severe → headache, cerebral angiopathy, epileptic seizures, or psychological changes resulting in personality changes. The latter can produce lack of motivation, irritability, ethic or moral deficiencies, and even lapse into crime. The affected people notice these changes and if they cannot get help they might choose suicide to end their suffering.

Therapy Drug therapy of brain trauma is costly, has side-effects, and is not very successful. Neural therapy should be the treatment of choice. Brain function depends primarily on the condition of the vascular system. Non-reversible symptoms such as, headache, vertigo, insomnia, lack of concentration, nervousness, and psychological changes are generally caused by vascular spasms of the arterioles (Riechert).

The → (T) intravenous use of procaine (but not lidocaine and mepivacaine) and its injection under the → (T) scalp (at the level of the temples and the parietal bone, the location of the trauma and the opposite side) produces vascular dilatation and reduces vascular permeability either directly or through dermatovisceral and osteovisceral reflex pathways. It normalizes the intracranial vascular tone and the disturbed peripheral blood circulation, reduces central excitation, and suspends pathogenic reflexes. In the case of craniocerebral trauma an increased amount of acetylcholine is secreted. Procaine inhibits the secretion at the synapses of the central nervous system and protects the brain cells.

Our strongest means against cerebral edema and the results of brain damage, even in older cases, is anesthesia of the → (T) stellate ganglion. The removal of the dangerous brain swelling in the acute state is as imperative as it is difficult. The spacial constriction caused by the skull causes irritation and compression damage that can be fatal. The approach that utilizes drug-induced dehydration has more side-effects than therapeutic results. Dehydration depends on the restoration of the regulating activities of the autonomic system. Anesthesia of the stellate ganglion normalizes the autonomic regulation of the corresponding upper body quadrant. It stops the edema formation through normalization of the endothelial barrier and draining of the edema. The suspension of the cervical sympathetic trunk leads to further dilatation of the vessels. Between the destroyed brain tissue and the healthy brain tissue there is always a damage zone. In this zone, vascular spasms inhibit the removal of detritus and metabolic roughage and the distribution of proper amounts of oxygen and nutrition. By removing the vascular spasms we can save whatever is salvageable and restore the function of parts of the tissue that would otherwise be doomed. What is destroyed remains destroyed. Even in older cases, with sufficient repetition of the injections, considerable improvement of mental and physical mobility can be achieved.

Injections into the → (T) thyroid can lessen persistent autonomic hyperexcitability due to shock. With proper indication, → (T) cisternal procaine injection should be considered in the case of interference field formation in the brain. If our efforts are without success, we have to search for an interference field that has weakened the system previously via first insult (Speransky) and prevents positive results from the generally helpful injections. Neural therapy deserves more consideration in the treatment of cerebral concussion and its consequences because it has proven successful, particularly when used at an early stage to act prophylactically. Cerebral concussion can occur without trauma to the head; see → coccyx, contusion of.

Case History 22: F. S. Clerk, Aged 48

In a motorcycle accident, F.S., a 48-year-old clerk from Beelitz, suffered a jaw fracture, several lacerations on the head, and a basal skull fracture with cerebral concussion. Due to the danger of suffocation a tracheotomy was performed. Horner syndrome on the left was indicative of damage to the cervical sympathetic trunk. Clinical diagnosis: severe cerebral concussion (craniocerebral trauma III). His health history included: bullet lodged in lung, shell splinter damage to the popliteal area. His main complaint was an imbalance disorder that had remained unchanged in spite of intensive specialized treatment for 1 year.

The last diagnosis from a specialist that was made 9 months after the accident and 3 months before I began treatment: ptosis left, pupillar light reflex weak on the left, good on the right, and idiomuscular abdominal reflex slightly weaker on the left than on the right. Finger-nose test: great deviation on the left with poor correction. Knee-heel test: exaggerated motion on the left. Romberg's test: staggering, adiadochokinesis on the left. Walking a straight line with eyes closed very shaky.

After the first intravenous procaine treatment under the scalp, infiltration of all head, neck, and chest scars as well as the left stellate ganglion, the imbalance disorder improved immediately. He was able to dance, ride his bicycle and motorcycle, which was previously out of the question. One week after my treatment, the laconic diagnosis of his specialist, who was also the head of a district hospital, read: "In-depth neurological examination shows, in addition to ptosis on the left, only an idiomuscular abdominal reflex favoring the right, otherwise no particularities." Two follow-up treatments, 1 and 3 months later, removed all other complaints entirely.

Congenital dilatation of the colon → megacolon.

Conjunctiva, conjunctivitis → eye disease.

Constipation In chronic, spastic, or hypotonic constipation, injections to the left (occasionally also to the right) abdominal → (T) celiac ganglion and into the → (T) epigastrium produce a striking, sudden improvement in over half the cases. If we want to involve the cutaneovisceral reflex pathways, we have to set → (T) quaddles in the Head's zones related to the intestine:

- *Small intestine:* T9 to T11 with focus on the umbilicus and the area to the left and right of it; also dorsal.
- *Large intestine:* T11 to L1, particularly a strip three fingers' breadths below the umbilicus to three fingers' breadths above the symphysis. Do not forget the dorsal Head's zones. If we find any hyperalgetic points by palpation of the abdomen we administer → (T) peritoneal infiltration. The area of McBurney's point and the corresponding area on the left abdomen should also be included. If there is an appendectomy scar, this must always be treated at the same time as a → (T) scar in the segment.

If there is hypotonia in the rectum, a → (T) presacral infiltration is indicated in addition to quaddles in the dermatome T10 through L3 ventrally and dorsally. If this is ineffective, search for the interference field. In this, all scars, the pelvis, and paranasal sinuses should be borne in mind. Hypotonic constipation occurs more frequently in women than in men. Thus, women should also receive injections into the → (T) pelvic region.

In hypotonic forms, treatment of the nasal reflex zone of the middle → (T) nasal concha or merely a → (T) nasal spray may yield results. There should be no premenstrual nasal treatment, to avoid provoking premature and painful menstrual bleeding! Acupuncture recommends injections of the sole of the foot at a depth of 5–10 mm, where the ball of the big toe joins that of the small toes.

The use of laxatives must be cut down and replaced by lactose, linseed oil, and by recommendations for a low-carbohydrate high-protein diet. Psychogenic cases cannot be cured by neural therapy. A depressed patient is often constipated, and the chronically constipated are often grumpy and prone to depression. See also → abdomen.

Contracture In contracture, ligaments and muscles are subjected to neuroreflectory pathological tonus changes with greatly increased tone and may lead to shrinkage of capsules and ligaments, and ultimately to ankylosis. → (T) Quaddles around the joint and → (T) intramuscular infiltrations into the affected areas of tissue block these reflexes and restore the possibility of regression, since normal tonus returns because of the break made in the pain cycle. If these and further injections into the → (T) joints, the → (T) afferent arteries and nerves, and into the lumbar → (T) sympathetic chain or the → (T) stellate ganglion produce no substantial change, we must ascertain whether an interference field is not preventing the restoration of normal conditions.

Contusions → injuries.

Convulsions in pregnancy → eclampsia, pre-eclampsia.

Coracoiditis In the case of painful inflammation of the coracoid process at the shoulder level, 1 mL 1% or 2% procaine solution is given intravenously (→ (T)

intravenous procaine injections) on the side of the inflammation, and about 1 mL to the painful → periosteum; in stubborn cases, injections also into the homolateral → (T) stellate ganglion. Otherwise, look for the interference field. See also → cervical syndrome.

Corneal herpes → eye disease.

Corneal ulcer → eye disease. If neural therapy is started early enough, opacities can be prevented. Even severe clouding can still be reduced by neural-therapeutic treatment.

Corns Infiltrate down to the periosteum and lift out the corn. As a curiosity, I once found a painful corn to be the interference field responsible for a headache. One really needs to think of everything!

Coronary disease coronary insufficiency, sclerosis, spasms: → heart.

Coryza A → (T) nasal spray repeated several times will stop incipient coryza and relieves a cold that has already taken hold. Chronic rhinitis: → nose.

Costoclavicular syndrome If the nerves and vessels in the area between the first rib and the clavicle are compressed, symptoms may present that generally correspond to the → scalene (cervical rib) syndrome. This disorder is common amongst asthenics with severely sloping shoulders.

Cough reflex To reduce an irritating cough during intubation or surgery and to cough up bronchial secretions painlessly after surgery, Zipf recommends procaine given intravenously (→ (T) intravenous procaine injections). See also → pharyngitis.

Coxarthritis, coxarthrosis, coxitis → joints.

Cracked skin → rhagades.

Cradle cap (crusta lactea) → skin. Very often, injection into the → (T) tonsils, repeated if necessary, will be effective. This injection can also be administered to infants.

CVA → stroke.

Cystic fibrosis This is a hereditary pancreatic disease with fibrous changes and cyst formation combined with a disturbance of all mucous-secreting glands. Particularly the bronchial glands produce only viscous mucous. Even in infants it is possible to try to alleviate the secondary symptoms with anesthesia as a complementary means by injecting the left → (T) celiac ganglion and the → (T) stellate ganglion (alternating between right and left 1 to 2 times a week) (Mora, Werthmann, Wischnewski).

Cystitis We set → (T) quaddles in the segment, i.e., over the region of sacrum, coccyx, and symphysis (dermatomes T12 through L3, S2). In stubborn cases, → (T) epidural or → (T) presacral infiltration. It is also possible to instill 5–10 mL of 2 % procaine solution into the empty bladder and then have the patient change position as in roll therapy. This improves tenesmus quickly and removes the complaints. See also → kidneys, → bladder, irritable.

D

Dacryocystitis → eye disease.

Deafness, defective hearing → ears.

Degenerative diseases See Chapter 3 on Rejuvenation Through Procaine?, Part I, Section C; → geriatric disorders.

Degenerative hip arthrosis → joints.

Delivery → obstetrics.

Dental extractions, after-pains Inject about 0.3 mL into the buccal and palatine aspects of the gums (→ (T) teeth). Apart from eliminating local pain, this will also dispose of all extradental side-effects and symptoms such as headache, neuralgia, or backache.

Dento-alveolitis → periodontosis.

Depression Depression is not necessarily an illness as such. It often accompanies as a secondary symptom some other deep-seated disorder caused by an interference field, and, in such cases, it can be eliminated via a lightning reaction. For premenstrual depression: → dysmenorrhea.

Therapy Test injection into the → (T) thyroid, for women also into the → (T) pelvic region. Also test thoracic area with → (T) quaddles above the chest and paravertebrally. Procaine preparations, even when administered at random, have some anti-depressive effect. This is probably due to MAO (monoamino oxidase) inhibition in the brain and a raised irritation threshold for the impulse transfer by the nerve tissues (Ostfeld).

Dercum disease → obesity.

Dermatitis In acute dermatitis, give procaine or lidocaine intravenously (→ (T) intravenous procaine injections). Dermatitis herpetiformis → Duhring disease. In infantile seborrheic dermatitis, search for the interference field (umbilicus, tonsils, ears?). See also → skin.

Diabetes insipidus Procaine intravenously (→ (T) intravenous procaine injections) and bilaterally under the → (T) scalp.

Diabetes mellitus Infections, toxins, mental and physical trauma can stress an incompetent pancreas to the point of total exhaustion. In this, irritations are transmitted via the autonomic system to the higher-order diencephalo-hypophyseal system. The nutritional disturbance and the exhaustion of the functioning portion of the pancreatic apparatus can be temporary and reversible, especially at the beginning. In such cases the attempt to restore the regulating mechanisms to normality (in addition to diet and carefully dosed amounts of insulin or oral anti-diabetic preparations) can often achieve the object. There is still no practicable means available to the general practitioner for determining whether the disease may be due to a disturbance in the autonomic command-transmission system, whilst the glandular apparatus remains largely intact. In other words, in this type of situation the body is producing adequate quantities of insulin, but the response of the chemical receptors to the signals they receive is faulty. This is especially the case in overweight diabetics. We assume that in these cases the normal transmission of information can be restored by the repolarization and restitution of the cells. But this is worthwhile only if the treatment is started early and is carried through consistently. When too many regulating systems have become involved in the pathological processes, the disease can become irreversible.

A pancreas whose insulin-producing cells have been destroyed cannot, of course, be made to function again. Even if the percentage of cures is not very high, the cures achieved within the segment by injections alternately left and right into the abdominal → (T) celiac ganglion and into the → (T) epigastric region, and via an interference field, prove that it is worth the attempt. This has a positive effect on diabetic enteropathy (diarrhea, stearrhea, reduced acid production, and disturbed stomach emptying).

Diabetic gangrene → neurocirculatory disturbances.

Diabetic polyneuritis → neuritis, → neurocirculatory disturbances.

Diaphragmatic hernia → hiatus hernia.

Diarrhea → abdomen.

Digestive disorders → abdomen.

Dilatation of the colon, congenital → megacolon.

Discharge, vaginal Exclude gonorrhea or trichomoniasis. See also → pelvis, → gynecological dysfunction.

Disequilibrium Exclude the possibility of a → cerebral tumor! Inject procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp, or to the → (T) stellate ganglion (see Case History 22). In cases of vestibular vertigo, see → ears, → vertebral artery compression syndrome. If of no avail, find the interference field (see Case History 5, Part I, Section C, Chapter 2). See also → vertigo.

Dislocated shoulder → joints.

Dislocation To reduce a fresh dislocation simply, the periarticular infiltration (→ (T) joints) of procaine is in many cases perfectly adequate! It also suppresses the formation of → hematomas. If the dislocation is not recent, also inject into the affected → (T) joint and intramuscularly (→ (T) intramuscular infiltrations) into the muscle spasm, followed by reduction under anesthetic. This ensures rapid healing and prevents → contractures. If necessary, follow-up treatment with accurately sited → (T) quaddles and deeper injections to any hyperalgetic points found by palpation, also to the sensitive periosteum of the points of attachment of tendons and ligaments. See also → joints → dislocated shoulder.

Disuse atrophy Atrophy of the muscles due to inactivity is often the result of pain following → injuries or → inflammation. These causes are easily eliminated by injections into the tissue affected by pain, to restore mobility within a short time.

Dizziness → disequilibrium, → vertigo.

Dropsy, cardiac → heart.

Dry pharyngitis → pharyngitis sicca.

Duhring disease dermatitis herpetiformis. Infiltrate around and under the blisters.

Duodenal ulcer → abdomen.

Duplay disease → joints (humeroscapular periarthritis).

Dupuytren's contracture The etiology of the shrinking of the palmar aponeurosis, the tendon sheaths of the fingers, and the skin is unknown. In addition to a hereditary disposition, irritation of the spinal root, cervical sympathetic trunk, and ulnar nerve have to be considered. Before choosing the surgical approach, injections to the → (T) stellate ganglion and the → (T) ulnar nerve are indicated. Repeated procaine injections of about 5 mL into the chronically inflamed contracting scar tissue soften it noticeably. If the treatment is repeated a sufficient number of times, the contracture will improve. Post-operative fibrosis can also be substantially improved by this treatment. If the disease is due to lack of vitamin E, this missing building block must be given in addition. Like any other pathologically changed tissue, Dupuytren's contracture can also become an interference field for other disorders, as has been proved by lightning-reaction cures (see Case History 25).

Dysbasia, angiospastic → neurocirculatory disturbances, → (T) sciatic nerve (post-sciatic circulatory disturbances).

Dyshidrosis, dysidrosis → hyperhidrosis. Tendency to sweating of hands and feet, in → rheumatism; → thyrotoxicosis, → menopausal disorders, → neurodystonia.

Dysmenorrhea and premenstrual syndrome including depression and aggressive irritability Exclude organic causes such as inflammation, fixed retroversion, endometriosis, adhesions, myomas, etc. Generally, however, the cause is functional or psychological. In functional dysmenorrhea, neural therapy is reliable in helping the patient. If the pain abates when bleeding begins, there may be a spastic or organic obstruction at the cervix uteri. In such cases, → (T) quaddles over the sacrum and the symphysis pubis will help, through which we can infiltrate down to the peritoneum. Still better are injections into the → (T) pelvic region or to → (T) Frankenhauser's ganglia (before the onset of the period). If there is severe backache, also inject into the → (T) sacroiliac joints. These injections will result in painless periods and the flow will become normal. If pain continues beyond the onset of the period, the patient may be suffering from "nasal dysmenorrhea." A correctly sited injection of local anesthetic into the inferior → (T) nasal concha will, in such cases, eliminate the hypogastric pain, and injection of the septal tubercles will eliminate the backache. A → (T) nasal spray with 2 % pantocaine solution is much simpler and will generally suffice.

Dysosmia → nose.

Dyspepsia in infants → gastroenteritis, infantile.

Dysphagia → (T) vertebral artery, → (T) stellate ganglion, → (T) superior laryngeal nerve, → (T) glossopharyngeal nerve, → (T) tonsils.

Dyspnea Depending on origin: → heart, → lungs.

Dystonia, neurovegetative → neurovegetative dystonia.

Dystonia, pulmonary intravenously (→ (T) intravenous procaine injections) with → (T) quaddles above the chest and back. If that does not suffice: → (T) stellate ganglion.

Dystrophy → malnutrition, → abdomen.

E

Ears The hearing apparatus of the inner ear is an arterial end organ, i.e., one that is not secured by a collateral circulation. For this reason it reacts especially sensitively to circulatory disturbances that can produce such symptoms as partial deafness, tinnitus, or vertigo. If the symptoms vary and tend to appear as recurrent attacks, a vertebral genesis must be suspected. Any irritation of the cervical sympathetic chain and of the sympathetic fibers can produce a response in the form of vascular spasms with their serious consequences. Any therapy capable of eliminating this irritation of the nerves and of normalizing the blood supply is bound to offer a hope of success. In certain cases this may be achieved by manipulative therapy of the cervical spine. But neural therapy is generally successful, by means of accurately placed injections. For segmental treatment of all disorders affecting the ears, including labyrinthine vertigo, we have the following means at our disposal:

1. → (T) Intravenous injections on the affected side and, if both sides are involved, alternately left and right. This dilates the afferent vessels and seals them. In small children, we obtain the same results by periarterial injections to the → (T) brachial artery. This injection can instantly and by itself eliminate all pain and any inflammation that may be present.
2. In addition to the intravenous injection we also inject behind the earlobe to the anterior edge of the → (T) mastoid process. This point corresponds to TB-17 in acupuncture. In disorders of the ear we also make use of the "gate of the ear" (TB-23) in the dimple between tragus and upper attachment of the external ear, and of TB-18, which lies a fingers' breadth behind the middle of the ear (above the supra-mastoid ridge), where it is usually palpable as a dimple. Another helpful point in the case of tinnitus is located at the posterior ramus of the mandible, approximately 1 cm superior to the mandibular angle. A small dimple can be palpated at this point. The direction of injection is toward the corner of the mouth. If this caused toothache, the tip of the needle has to be adjusted cranially.
3. → (T) Quaddles can also help in disorders affecting the ear. These act both directly and indirectly upon the inner ear via cutaneovisceral pathways. We set four to six quaddles in the region of the cervical segments C2 through C3 on both sides of the spinous processes, starting two fingers' breadths below the inferior border of the occipital bone. We also set quaddles over the ends of the lateral processes of the first cervical vertebra (atlas), over the depressions behind the ear lobes and, if the periosteum is pressure-sensitive, we also go down to the periosteum itself.
4. An injection to the → (T) stellate ganglion can still be effective where the injections described in (1) to (3) above are not enough. The previously pale eardrum turns as red as a beet and the dilatation of the labyrinthine vessels has also been demonstrated. Because the labyrinth is supplied by the → (T) vertebral artery we can affect the inner ear through injections to its periarterial plexus.
5. We can expect a similar effect from para-arterial injections to (but never into!) the → (T) carotid artery.
6. Injection to the medial pterygoid nerve. As soon as the mandibular nerve leaves the cranial cavity by way of the foramen ovale, it devides into its branches (Gasserian [otic] → (T) ganglion). The medial pterygoid nerve is the most central of those banches and supplies not only the muscle of the same name and the tensor veli palatini muscle but also the tensor tympani muscle. In that way the objective tinnitus can be affected.
7. For the injection into and to the eustachian tube, the needle is inserted 10 mm cranially from the upper tonsillar pole (→ (T) tonsils) and is then pushed about 10–20 mm in the direction of the external auditory canal. The patient will indicate when he or she feels the liquid in the ear. See also under → (T) glossopharyngeal nerve. Indication: acute and chronic tubal catarrh.
8. Where there is pain in the external auditory canal, we anesthetize the posterior branch of the greater auricular nerve. This surfaces about 20 mm caudally from the mastoid process, at the posterior edge of the sternocleidomastoid muscle and runs from there to the base of the auricle. In the case of → neuralgia: → (e) intermedial nerve and (u) tympanic plexus.
9. In cases of vertigo, severe tinnitus, the sudden onset of deafness, and Ménière disease, which do not respond to intravenous injections and to anesthe-

sia of the mastoid and of the stellate ganglion, anesthesia of the eardrum (labyrinth) may be effective. This should be carried out by a specialist, as follows.

Anesthetize the eardrum by instilling 2% pantocaine or 4% lidocaine (Xylocaine) solution mixed with the contents of an ampul of dried kinetin (hyaluronidase). Introduce a tubal catheter through the nose and insert a thin wire mandrin with lubricated cottonwool. This prevents the liquid from flowing out of the tympanic cavity. The patient lies flat on his or her sound side. Using a fine needle, 0.7 mL of the mixture of anesthetic and kinetin is injected through the posterior lower quadrant of the drum. After 20 minutes to half an hour the local anesthetic will have diffused into the labyrinth. Nystagmus to the opposite side will occur and be accompanied by severe vertigo and possibly by vomiting. The dizziness will persist for 2–3 hours and can be relieved by the administration of an anti-emetic. One injection will generally suffice, but occasionally two or three may be required. In about a third of the patients, hearing may be impaired, but the majority accepts this as the lesser evil.

If necessary, segmental injections should be repeated once or twice weekly. If they are ineffective, we need once again look for an interference field. In this context, Kretzschmar (United States) reported a number of cures by lightning reaction following injections into the epigastrium. In some of these cases, the patients were suffering from advanced inner-ear deafness. Their deafness thus proved to be the remote effect caused by an abdominal interference field.

Acute and chronic otitis media Procaine deals with inflammation by attacking it in its essence, whilst antibiotics attack the pathogenic agents. A local anesthetic can ordinarily cause both acute and chronic otitis media to heal quickly and without complications. Initially, increased secretion should be regarded as a favorable reaction in these cases. In scarlet-fever otitis we additionally give injections to the → (T) tonsils.

We do not treat *cholestea-tomata* or severe destruction of the inner ear. These must be referred to a specialist!

Defective hearing Treatment as stated. If inner-ear deafness occurs suddenly and is unilateral even without any vestibular symptoms, an autonomic vascular etiology should always be borne in mind. Mechanical constriction of the intervertebral foramina and compression of the afferent arteries due to changes in the cervical spine are less important in producing the disorder than the part played by sympathetic interference impulses, which produce labyrinthine hydrops, with oxygen deficiency and pressure on the nerve cells. Neural therapy can eliminate the neural irritation that is the cause.

Earache can also be caused by the teeth! A diseased second upper molar and the sixth and seventh tooth of the lower jaw can radiate pain to the ears.

Otosclerosis Investigations have shown that about half the cases of clinical otosclerosis are accompanied by an autonomic inner-ear disturbance and that otosclerosis is frequently the result of such a disturbance. Combined treatment of the → (T) sympathetic chain and spine is recommended at the start of this disorder.

Post-auricular scars following total mastoidectomy We often encounter these as causes of remote disturbances. Care must be exercised in testing deeply indrawn scars. Only a superficial → (T) quaddle should be set at the bottom of the funnel-shaped scar. Because of the proximity of the meninges, deeper injections can produce unpleasant reactions such as vertigo and vomiting. Here (and only here!) it is therefore better to infiltrate around the scar and to go to the adjacent periosteum, whilst we normally inject in depth directly into the scar itself.

Sudden deafness Occlusion or constriction of the internal auditory artery can cause loss of hearing. Reversible intravascular clotting of red blood cells (blood sludge) is discussed as another cause. There is little hope of curing or even partly restoring this loss unless the blood supply to the inner ear can be improved within the first week to fortnight. The same is true in the case of blood sludge. The use of procaine can inhibit the clotting of red blood cells through vessel dilation and acceleration of the microcirculation. Apart from giving the patient preparations to dilate the end-arterial system, daily injections to anesthetize the → (T) stellate ganglion should be administered during the crucial fortnight. If treatment is started at once, the chances of a complete cure or at least of partial recovery of hearing are better than 90%. If treatment is begun 4 days after the sudden onset of deafness, the success rate drops below 65%. If treatment is started only 2–3 weeks after loss of hearing has occurred, there is little hope of substantial improvement.

Tinnitus Tinnitus can often be successfully treated by injections intravenously (→ (T) intravenous procaine injections) and to the acupuncture points TB-17 (mastoid process), TB-22 ("gate of the ear") and TB-18 behind the middle of the ear. Brand treated 96 patients by neural therapy to these three points, after 3 weeks of vasodilator and vitamin A treatment had produced no improvement. He used segmental treatment only, injecting the acupuncture points described in (2) above but leaving out the important injection to the stellate ganglion, the intravenous injection, and any treatment of the cervi-

cal spine or interference fields. In one to six sessions he achieved 7.9% complete freedom from symptoms, 32.9% substantial improvement, 34.2% some improvement and only 25% showed no change. These three points are therefore recommended as the basic treatment for tinnitus. If this proves inadequate, a number of other possibilities remain available to us.

One form of tinnitus is often described as being like the ticking of a clock. This is caused by nystagmuslike muscular twitching of the tensor palati muscle and occurs at the same rhythm as the ticking that the patient hears and which is macroscopically visible. It closes the walls of the eustachian tubes.

Treatment 0.5 mL procaine to the → (T) nerve-exit points at the greater palatine foramen, to the → (T) stellate ganglion or to the Gasserian (otic) ganglion (→ (T) mandibular nerve). Through the latter we also reach the branch of the pterygoid nerve that contains fibers for the tensor tympani muscle. That has nothing to do with the Gasserian (otic) ganglion directly. There is also a vertebragenic form of tinnitus. This originates in the cervical spine and is a symptom of the → vertebral artery compression syndrome.

There is also such a thing as neurovascular tinnitus. This is vertebragenic, originates in the cervical spine and is associated with the → vertebral artery compression syndrome.

Vertigo In otogenic vertigo, in addition to the injections described in (1) and (2) above, we also try an anesthetic of the greater auricular nerve. This is found below the mastoid process, where it reaches the surface about the middle of the lateral edge of the sternocleidomastoid muscle. It is often palpable there as a hyperalgetic point.

Eclampsia, pre-eclampsia According to Knaus, eclampsia is the result of a neurovegetative circulatory disturbance provoked by overdistension of the uterus, producing ischemia of the renal cortex and of the cerebral vessels by reflexes via the autonomic nervous system.

These disturbances occurring as spastic vascular impulses are treated by injections into the → (T) stellate ganglion and splanchnic anesthesia → (T) celiac ganglion. Headaches, dizziness, and impaired vision, especially in pre-eclampsia before breakdown, disappear very strikingly and blood pressure is definitely lowered. Where eclampsia has already occurred, → (T) peridural anesthesia given in addition is even better able to set diuresis in motion. In the light of Knaus's theory, injections into the → (T) pelvic region and → (T) Frankenhauser's ganglia should also be borne in mind.

Ecthyma Local infiltrations, possibly also intra- and periarterial injections into and around the → (T) femoral artery. See also → skin.

Eczema If the treatment suggested under → skin is not effective, try naturopathic methods such as fasting, Kneipp's therapy, baths, bloodletting, autohemotherapy, normalization of intestinal flora, → (T) Ponndorf's and Baunscheidt's vaccinations etc. Once the regulatory block has been removed by these means, neural therapy can be more successful. In infantile eczema, only an interference field can provide the answer: umbilicus, ears, tonsils?

Edema Any edema is always a visible sign of disturbed neural regulation with increased capillary permeability. Procaine (but not lidocaine) seals the capillaries. If it is not caused by a cardiac or renal condition or due to an interference field, it generally responds well to local procaine treatment with → (T) quaddles. Muschaweck confirmed the anti-phlogistic and capillary sealing effect of procaine, which he believes stems from its fission products p-aminobenzoic acid and p-aminosalicylic acid. Encouraged by the example of acupuncture we set these quaddles also in the lower third of the leg over the posterior → (T) tibial artery (→ Fig. 3.**6**, Part III). Deeper injections intra- and para-arterially can increase the effect. In the case of post-traumatic edemas of the upper extremities we anesthetize the → (T) stellate ganglion. Ankle edema in women often disappears following repeated injections into the → (T) pelvic region.

Post-thrombotic edema → thrombophlebitis. See also under → heart, → cerebral edema, → kidneys.

Edema, angioneurotic → angioneurotic edema.

Edema, cardiac → heart.

Edema, cerebral → cerebral edema.

Edema, facial, persisting after erysipelas → (T) stellate ganglion.

Ejaculation, premature (ejaculatio praecox) If, as is often the case, the prostate is enlarged and pressure-sensitive, inject to or into the → (T) prostate and the → (T) pudendal nerve. With nervous predisposition showing signs of autonomic hypersensibility additional injections into the → (T) thyroid are indicated. See also → sexual disturbances.

Elbow → joints, → periosteum, → epicondylitis.

Elephantiasis → lymphedema.

Embolism → vascular occlusion.

Emphysema → lungs.

Encephalitis In addition to antibiotics, procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp will help to eliminate the attendant symptoms and act as a prophylaxis against consequential damage. In severe cases and with later sequelae, inject into the → (T) stellate ganglion or superior cervical → (T) ganglion.

Encephalomalacia Procaine intravenously (→ (T) intravenous procaine injections), under the → (T) scalp and injections into the → (T) stellate ganglion or the superior cervical → (T) ganglion.

Encopresis Unintentional bowel movement can be reduced by a series of→ (T) epidural infiltrations.

Endangiitis, endarteritis obliterans → neurocirculatory disturbances.

Endocarditis → heart.

Endometritis → pelvis.

Enteritis, necrotizing Procaine intravenously (→ (T) intravenous procaine injections) and into the abdominal → (T) celiac ganglion and → (T) preperitoneal infiltrations at pressure-sensitive points.

Enuresis nocturna Incontinence of organic etiology, e.g., due to epilepsy, mongolism, and idiocy must be excluded from treatment. Primary enuresis is caused by instability and hyperactivity of the muscles that are responsible for urination. The function of the Barrington reflex arc is not completely developed. Centrally and segmentally caused innervation disturbances of the bladder's sphincter mechanism can generally be eliminated with ease and striking success by neural therapy. We set four to six → (T) quaddles into the Head's zones over the sacrococcygeal region. The old-style pediatrician believed that to cure this disorder anything that impressed the child sufficiently would help. Perhaps the fear of pain in our treatment is, on purely psychological grounds, at least partly responsible for its success. It must be repeated immediately as soon as its effect begins to wear off. If the parents reject injections, we set some → (T) Ponndorf's vaccinations over the sacrum. If these are not successful, at least in the case of older children, an → (T) epidural injection into the sacral hiatus is a promising approach. When searching for an interference field, the infiltration of the navel (the first → (T) scar of every human being) can show its causal involvement in the urination disorder. In addition, the tonsils may play a causal part.

A combination of this therapy with time-tested tricks taken from child psychology can never do any harm. For example, the child is given a candy, not in the evening before going to bed but in the morning if the bed is dry. The calendar is then marked with a colored circle instead of the black mark, which indicates failure. Such bookkeeping must be shown from time to time to all the visiting people that the child respects, particularly to "uncle doctor." Praise encourages. The suggestion should be made constantly to the child that it will in future wake automatically when his or her bladder is full. Capitulation and simply letting matters drift are as mistaken as severe punishment. Deep sleep must be interrupted by the waking reflex when the bladder is full, and this reflex must first be produced by conditioning the subconscious.

Epicondylitis In addition to the procedure described in → periosteum for dealing with the diseased periosteum itself, it is always necessary to find any fibrositic nodules by palpation of the adjacent musculature and to infiltrate these. The most painful point is located above the head of the radius. Lateral humeral epicondylitis or "tennis elbow" is a tendopathy at the insertion of the carpi radialis and extensor digiti communis muscles. If the tendon insertions of the medial side are effected, it is called "golfer's elbow." Epicondylitis may be the result of → ostechondrosis or → cervical syndrome. Irritation of the cervical sympathetic chain is treated with anesthesia of the → (T) stellate ganglion. See also → joints (elbow-joint syndrome).

Epidemic parotitis, post-operative parotitis In mild cases, this is cured rapidly after administration of a neural-therapeutic preparation intravenously (→ (T) intravenous procaine injections) on the affected side and by → (T) quaddles over the gland. In more severe cases, periglandular infiltration and, the most effective treatment, anesthesia of the stellate or the → (T) Gasserian (otic) ganglion. Following parotitis, the parotid gland can turn into an interference field. To test and eliminate, insert the needle at the root of the earlobe and infiltrate fanwise into the gland over the masseter muscle. See also → neuralgia of the auriculotemporal nerve.

Epididymitis As in any → inflammation, set → (T) quaddles locally over the affected area. In the highly acute state, additionally inject 1–2 mL to the spermatic cord and first wait to see what effect this has. If necessary, then inject another 1 mL to and into

the palpable swelling of the epididymis, using a very fine needle. In chronic cases that do not respond adequately to this treatment (and when gonorrhea can be excluded), try injections into the → (T) prostate, to the → (T) pudendal nerve, or → (T) epidural infiltrations.

Epilepsy

1. *Idiopathic epilepsy:* Genuinely hereditary diseases cannot be cured by neural therapy. In idiopathic epilepsy there is permanent brain damage. This is the cause for the convulsive tendency that is liable to become autonomous and automatic. From Speransky's experiments we know that any point in the brain may become an epileptogenic interference field. Once convulsions have started, they can go on automatically and even the surgical removal of the primary focus will no longer have any effect. Apparently, in an attack, electrobiological voltage differences are discharged as in a thunderstorm, which cannot be brought back into equilibrium by physiological means.

   Since in most cases the physician does not know whether the patient is suffering from a hereditary or an acquired form of epilepsy, an attempt at treatment in doubtful cases is always justified. Treatment has shown that, in addition to the autonomous brain damage, there are also peripheral epileptogenic zones that are accessible to us. By treating these we are often able to reduce the number and severity of the attacks substantially. If, for example, the first attacks began with the first period, we inject the → (T) pelvic region. If they started shortly after a surgery or smallpox vaccination, we try the corresponding → (T) scars. In cryptogenic cases, in addition to the → (T) intravenous injections and injections under the → (T) scalp, we also try injections to the appendix, tonsils, etc., in order to reduce the internal stresses and with them the susceptibility to such attacks.

   It is important not to become irritated or discouraged by an attack that happens the day after we have treated the patient. An attack that is already on the way will still occur. It is essential to keep a detailed record, showing severe and minor attacks separately, to tell us whether an injection has produced more prolonged spells free from attacks or with relatively fewer or less severe attacks.

2. *Traumatic epilepsy:* The treatment of what is known as Jacksonian epilepsy is a substantially more favorable field for our efforts. As an example, let me quote a case in my experience. Mr. K. S. was shot in the head in 1914. For the next 40 (!) years, he suffered headaches totally resistant to all forms of treatment, and major epileptic attacks without aura three to four times a week. After only four treatments, at first weekly, then at longer intervals, with procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp, and under the scar down to the periosteum, he has remained completely free from symptoms or attacks for 15 years. In this time, he has become noticeably more agile mentally. Where an aura is present, it is possible to intercept epileptic attacks by injections into the → (T) stellate ganglion. Apparently it is possible by this means to eliminate the convulsive impulses to the innervation of the cerebral vessels. However, I have some doubts from a medical point of view on the advisability of completely suppressing a discharge when it is due.

Case History 23: B. G., Aged 10

Ten-year-old B.G. from Roßlau had torticollis surgery when she was 6. The surgery caused a "non-sensitive" scar behind the left ear. One year later she began having epileptic seizures. Initially the seizures came every 2 weeks. Within the next 3 years they recurred with increasing frequency (every 3 days) and intensity, finally reaching grand-mal seizures. They always occurred at night after going to bed and began with tingling of the left arm, followed by spasms, which lasted up to 5 minutes. During the next day she was always too exhausted and tired to attend school. In the course of 7 weeks, I removed the interference behind the ear three times. The seizures disappeared, medication was discontinued, and the treatment terminated.

Follow-up period. The patient is now 35 years of age and in the last 25 years she has been without seizures. She has three children, 3, 9, and 15 years of age, who have never suffered this sort of disorder. This is a case of traumatic epilepsy, caused by an interference field originating in a surgery scar behind the left ear.

3. *Status epilepticus:* It is generally known that local anesthetics in large doses produce convulsions. In subconvulsive doses, however, they generally have an anti-convulsive action without having any side-effects on consciousness, as is the case with the barbiturates, which were used previously. About 80% of grand-mal and Jacksonian epileptic attacks react promptly to the → (T) intravenous administration of 2–3 mg/kg of body weight of lidocaine (Xylocaine), injected over 30–40 seconds. If the epilepsy responds to the lidocaine, the attacks end within 30 seconds to a minute. The effect persists for about 20 minutes. If the attack recurs, it is advisable to change to

an intravenous drip in a physiological saline or glucose solution, with an hourly dose of 6–8 mg/kg (never exceed 10 mg/kg per hour!).

Example: 8 mg × 70 kg body weight × 2 hours = 8 × 70 × 2 = 1120 mg lidocaine; 1000 mg equals 50 mL of 2% lidocaine (without adrenalin!). The infusion should be continued for 2–3 hours after the last attack. If it is continued beyond 5 hours, a long-acting barbiturate should be injected intramuscularly (→ (T) intramuscular infiltrations) at 2-hourly intervals at the rate of 2 mg/kg body weight, in order to subdue cortical excitation. In rare cases, an overdose can produce convulsions. In this event, a short-acting barbiturate (e.g., 30–50 mg thiopenthal) is given intravenously. This should always be placed in readiness when lidocaine is administered intravenously.

Episcleritis → eye disease.

Epistaxis → nose.

Erysipelas Infiltration with procaine at an early stage will definitely prevent the erysipelas from progressing further, since it can only develop because of autonomic disturbances with local depolarization and consequent reduced autonomous defense by the body itself. In critical cases, if antibiotics do not suffice, injections into the regional → (T) sympathetic chain and its → (T) ganglia can save the patient's life. By these injections we revitalize the cardiac efficiency and the reduced autonomic tone. Blood supply is improved, metabolic waste products are eliminated more rapidly and the defensive capacity is increased. By this means we not only combat the bacteria but also reduce the irritation they have produced to a safe level, where the regulating mechanisms can again cope with it.

Erythrodermia → skin, → neurocirculatory disturbances.

Erythromelalgia The symptoms are painful attacks resulting from active vascular dilatation, particularly affecting the legs of elderly people and due to bed warmth. Anesthesia of the lumbar → (T) sympathetic chain restores balance to the disturbed perivascular nervous system. If necessary, a local anesthetic may also be infiltrated into the affected tissue areas. Erythromelalgia may be caused by diabetes mellitus, thromboangiitis obliterans, or polycythemia. If so, this condition must be treated appropriately at the same time.

Erythroprosopalgia Unilateral headache due to neurovascular disturbance: → Bing-Horton syndrome, → headache, → migraine, → neuralgia.

Esophageal stenosis First exclude cancer! If there is spastic stenosis, → (T) quaddles at segmental level on both sides of the sternum and the thoracic spine (T5 through T8). Or injection to the → (T) stellate ganglion or → (T) paravertebral anesthesias in the area of T5 (through T8), vagus → (T) nerve, interference field?

Ethmoid cells, disorders of → nose.

European adder bite In addition to the common proximal stasis and wound expansion, the easiest and best treatment for → snakebites consists in generous injections around the site of the bite with 1–2% procaine, ideally within the first half-hour after bite. Treatment is repeated if necessary until the "toxic" symptoms have vanished. → (T) Intravenous injections are given for → shock prophylaxis and rapid reversal of the circulatory disorder. Reports from all around the world confirm this approach. If available, the patient should be treated with the serum. See also → snakebite.

Exophthalmic goiter → thyrotoxicosis.

Exophthalmos → eye disease. According to Russian ophthalmologists, an 8 mm exophthalmos disappeared within 2 days after a dental extraction. F. Huneke described a similar cure from a thyroidectomy scar and another by injections within the segment.

Therapy If the cause cannot be found and there is no contraindication try injections to the → (T) stellate or ciliary ganglion.

Extrapyramidal spasticity → spasticity, extrapyramidal.

Extrasystoles → heart, → thyroid.

Eye disease F. Huneke's statement that "Impletol attacks inflammatory conditions at the root of their being, no matter what the noxious agents may be called which have caused the inflammation" shows that segmental treatment with procaine is indicated for all inflammatory eye conditions. And most eye disorders are inflammatory in their acute phase, in which the fate of the eye is decided, whether we are confronted with neuritis of the optic nerve, retinal periphlebitis with vitreous hemorrhage, scleritis, keratitis, iridocyclitis, or even cases regarded as being due to a rheumato-allergic cause such as sus-

pected tuberculosis of the eye. Misgivings about the use of Impletol near the eyes on account of its caffeine content are unfounded. The caffeine in this product is in a complex compound and is never contraindicated, not even in glaucoma.

Obviously, neural therapy should always be started as soon as possible, before the possibility of regeneration and recovery of the eye's functions has been lost and cicatrization has occurred. Any major eye surgery and prolonged cortisone treatment can only reduce the chances of success for neural therapy. Atrophy of the optic nerve and blindness do not occur if a retrobulbar neuritis of neural origin is cured in time by segmental treatment or by the elimination of the interference field responsible. The eye is not an isolated organ but part of an entity that can receive interference impulses from any part of the organism, and these can produce a disorder. No further hemorrhage or scar formation will occur in a periphlebitis of the retina, if the interference field causing it, located, for example, in the pelvis, is eliminated by appropriate treatment with procaine.

The eye specialist forever staring through a tube at his or her specialist organ who forgets that a human being is still attached to the eye will never be able to cure such a disorder and must helplessly "treat" the eye to the bitter end. A great deal of suffering could be avoided if eye specialists learned to eliminate inflammatory conditions with procaine and to give any failures of segmental treatment the benefit of a skilled search for the interference field responsible (Case Histories 6 and 24). A good indicator for the effectiveness of injections is the rapid disappearance of pain in inflammatory changes of the eyes or in intraocular increases of pressure. For segmental treatment, the following injections are available to us:

1. As basic treatment, we have the → (T) intravenous injection on the side of the disorder, and where both eyes are affected, alternating administration of this injection left and right. It counters inflammation, improves the blood supply, eliminates edema of the retina, reduces allergic reaction, relieves pain, and reduces capillary permeability.
2. → (T) Quaddles over the temples at the lateral orbital margin and deeper injections down to the periosteum. Possibly also → (T) intramuscular injections of 0.5 mL into each of the temporal muscles, especially if there is any pressure-sensitive area there. Head's zones for the eyes are in the region of the neck, the occiput, and the ears (C1 and C2). Any hyperalgetic points found there by palpation should always be treated by quaddles and deeper injections under the → (T) scalp down to the periosteum.
3. Injections to the → (T) nerve-exit points of the supraorbital nerves, particularly if these are pressure-sensitive or if the condition is accompanied by frontal headaches, in conjunctivitis irrespective of etiology, blepharospasm, herpes, and corneal ulcer. Hyperalgetic points found by palpation of the head must also be treated.
4. Injections to the ciliary and the → (T) pterygopalatine ganglion have proved especially valuable. The eye is supplied with its autonomic fibers by complex pathways via these ganglia. The intraocular pressure, for example, is controlled autonomically via a ganglionic cell system of the choroid membrane, which is regulated and controlled via the ciliary nerves and ganglia.
5. Injections to the → (T) stellate ganglion can also produce the turning point, since this, of course, innervates the upper quadrant of the body.
6. In eye disorders that tend to be therapy-resistant such as glaucoma, iritis, ophthalmic herpes zoster, and painful corneal disorders, an injection to (but not into) the → (T) carotid or vertebral arteries can likewise take us a long step further.
7. In cases of deep-seated keratitis and episcleritis, subconjunctival injections of 0.5–1 mL of procaine can be useful.
8. If segmental treatment yields no results, search for the interference field! In folk medicine, the premolars of the upper and lower jaw are called "canine teeth" (Cases Histories 6 and 24). If the disorder is unilateral and other circumstances indicate this as advisable, a → (T) cisternal injection should also be considered.

Fuchs reported on the results he obtained with the injection to the ciliary and pterygopalatine ganglia described in (4) above. These ganglia supply the eye with its trophic nerve fibers. He used these injections especially for treating chronic disorders of the anterior parts of the eye, i.e., eyelids, conjunctiva, and particularly the cornea, "primarily those which to date it was not possible to treat by other modern methods. In other words, these were eyes that without neural therapy would go blind due to complete parenchymatous degeneration of the cornea or that might even be totally destroyed and require enucleation." In these selected cases, for which the prognosis was distinctly unfavorable, he was able to achieve 45 cures out of a total of 71 patients, and obtain 11 improvements! There was no change in only 10, and five became worse. For an experienced neural therapist there is little doubt that a skilled search for an interference field would have yielded success in at least some of those classified as failures.

The eye specialist is in the happy position that he or she can read the effect of his or her procaine

injections into the two ganglia directly in the superficial and deeper-lying vessels of the conjunctiva and sclera. In the split-lamp microscope, he or she can follow the way the cloudy cornea clears as a result of decongestion of the parenchymatous fibers. Even the swollen fibers of the corneal nerves can be seen to become smaller, until they disappear entirely.

Blepharitis Injections to the nerve-exit points of the lateral and medial supraorbital nerves or infraorbital nerve of the diseased side. In the case of severe blepharospasm, the temporo-zygomatic ramus of the facial nerve has to be treated several times with local anesthesia. This is done by injection below the mastoid process and infiltration one or two fingers' breadth toward the infra-orbital margin.

Cataract In the early stages of clouding of the lens, regression is usually still possible by means of neural therapy. A massive, ripe gray cataract, however, is a completely cicatrized terminal state in which the organism's self-healing capacity can only rarely change matters for the better even with outside help. Senile cataract can remain stationary for years, even decades, and may even improve spontaneously. This benign tendency justifies us in trying neural therapy where the condition has not progressed too far.

Choriorenitis If the specified injections do not bring improvement, the search for an interference field is indicated (teeth, tonsils, etc.).

The incompatibility with *contact lenses* can often be removed by repeated injections to the maxillary → (T) nerve (Vill).

Corneal ulcer and keratitis therapy Ciliary and → (T) pterygopalatine ganglion. See → Sjögren syndrome.

Dacryocystitis In the case of an inflammation of the tear sac, a short and thin needle (size 18 or 20) 0.5–1 cm is inserted cranially to the medial corner of the eye, moving dorsal-medially until the resistance of the orbital septum can be felt. Here, 1 mL is injected, the needle slightly retracted and another 0.5 mL are injected medially toward the bone. A third subcutaneous injection of 0.5 mL is placed 1 cm inferior and slightly medially to the corner of the eye. After that, the area of the injection receives gentle pressure to disperse the local anesthetic around the tear sac.

Glaucoma Locally administered beta blockers (e.g., retrobulbar procaine) can lower the intraocular pressure by 35–50% for at least 24 hours by reducing fluid production. The intraocular pressure is determined by the amount of fluid that is produced in the ciliary epithelium of the posterior ocular chamber and by the ease with which it can drain out. The lens and posterior cornea are nourished by intraocular fluid and not by blood. The composition of the fluid depends on the condition of the walls of the intraocular blood vessels. The episcleral plexus communicates with the Schlemm canal. Increased pressure in the plexus causes a backlog, which obstructs drainage of the intraocular fluid. If the osmotic pressure of the blood falls, the intraocular pressure rises. The autonomic reactive position is one of the determining factors of intraocular pressure. Repeated injections are required only until the computer represented by the ganglionic cells has learned to keep the pressure constantly regulated at the correct level. Vascular congestion of the ciliary body is the result of a block in the vascular regulating system. Anesthesia restores the disturbed circulation, thus relieving congestion and reducing pressure. In the case of an acute congestive glaucoma, any physician can provide relief by injecting procaine intravenously to the → (T) ciliary and stellate ganglion. This reduces intraocular pressure until treatment by a specialist is available.

Ophthalmic herpes zoster This reacts well to injections into the exit point of the supraorbital nerve in the supraorbital notch. Dammer reported on 80 cases treated successfully by this method. A second injection proved necessary in only four or five cases, 2 or 3 days after the first.

Squint For treating squint, we make several test injections into the → (T) ciliary ganglion on the affected side and into the hypertonic eye muscle. Several cases of squint that presented following diphtheria or scarlet fever were cured via the Huneke phenomenon following injections into the tonsils, which were acting as interference fields.

In geriatric eye conditions such as macular degeneration, an attempt to use neural therapy (with ample repetition) can often still be successful (Piotrovski).

Case History 24: Truck Driver, Aged 35

L.W., a 35-year-old truck driver from Kirchseeon came to see me in 1973. All specialists, including the ones from the clinic for chronic eye diseases, gave the following diagnosis: since January of 1972 chronically recurring bilateral iridocyclitis, central iridocyclitic retinopathy on the left. In spite of ongoing treatment, including cortisone and tonsillectomy, no considerable change in the condition. The patient had to give up his driver's license. Due to imminent blindness he began to study Braille and started to work with a guide dog.

Therapy: The electro skin test indicated an interference field in the fourth tooth at the upper right. Its extraction by the dentist was of no consequence. Supposedly, the remaining teeth were NAD. A new electro skin test showed red discoloration superior to the right mandibular angle. Radiography that included this area showed a dislocated impacted wisdom tooth in the right lower jaw. It was located in the immediate vicinity of the

mandibular canal. After removal of teeth 47 and 48, the condition of the patient improved considerably. Two months later, an abscess formed at the extraction site and was drained. It contained a copious amount of pus. The wound healed very slowly and required biological treatment (without antibiotics and sulfonamides). The eyes had become inflamed during the abscess formation. Now they improved and cleared up. After examination by specialists, the patient was allowed to work in his job as a truck driver. One year later, a clinical tampon drained from an abscess at the right mandibular angle. It had been forgotten during surgery. This was without any effect on the eyes. The patient was monitored for 11 years, without relapse. The true diagnosis including the cause: chronically recurring iritis and uveitis, due to an interference field caused by a dislocated wisdom tooth.

Eyelid, spasmodic twitching of → (T) nerve-exit points supraorbital nerve.

F

Facial neuralgia → neuralgia.

Facial pains → trigeminal neuralgia; see Head's zones for teeth in Chapter 1, Section C, Part I on Segmental Therapy.

Facial paralysis → paralysis, facial.

Facial spasm, facial tic → spasm, facial.

Fat metabolism, disturbed → lipodystrophy, progressive.

Fecal incontinence → encopresis.

Feet, cold According to W. Scheidt, the transition segment S2 has a close relation to the segments L2 and C8. This explains why cold feet can cause inflammation of the bladder, kidneys, and tonsils:

- In acute cases, a warm foot soak or alcoholic beverages can dilate the vessels and stimulate the blood circulation.
- In chronic cases, we begin by setting → (T) quaddles all round the ankle and calcaneal region. Injections to the periosteum of the medial aspect of the calcaneum. Also try peri- and intra-arterial injections to and into the → (T) tibial and femoral arteries and to the adjacent fossa ovalis. In women, injections into the → pelvis. If necessary, injections to the lumbar → (T) sympathetic chain may help. See also → neurovegetative dystonia, → neurocirculatory disturbances, → geriatric disorders.

Femoral neuralgia → neuralgia, femoral.

Femur, fracture of the neck of, pain following Injections to the periosteum of the → (T) trochanter major. See also → fractures.

Fever Health is not a static condition, but the product of continually active maintenance and restoration efforts by the vital regulating mechanisms. These spontaneous healing powers function cybernetically. Their most effective defensive weapons are the healing effects of inflammation and fever. Biologically oriented physicians regard fever primarily as a natural healing force reacting throughout the organism to effect a cure via the basic autonomic system. Modern medicine regards fever as a measurable disturbance in physiochemical areas and sees its main task in trying to normalize this totally and at once. To this end, chemotherapeutic preparations such as antibiotics and corticosteroids, which are all capable of saving the patient's life in an emergency, are often used too soon, for too long, in too large doses. The routine use of these medications for the treatment of fever without positive indication for a bacterial infection constitutes an irresponsible interference with the body's own → immune system. This has fundamentally altered the body's reactive capability to defend itself. As a result, the evolution of many disorders has also changed.

Whilst all these substances reduce the virulence of the micro-organisms involved, they weaken the body's natural defenses to such an extent that the bacteria remain active even in their attenuated form and can establish interference fields and allergies. Perger and Pischinger demonstrated that chemotherapeutic substances, antibiotics, and corticosteroids substantially restrict or paralyze the reactive capability of the basic autonomic system. In other words, an acute → inflammation is transformed into a chronic process, which places the basic autonomic functions under constant additional stress and consequently creates a continual readiness to fall ill. An acute illness, which nature with sensible medical help used to be able to fight and cure from within, has now frequently become a disturbance that the medical profession fights with potent chemical weapons by what must in the long run seem an unbiological approach. The pay-off for the body's natural defenses is now all too often that this prepares the way for infectious relapse and for new disorders, because by being repressed the disease has been transformed to a continually smoldering chronic state, which not infrequently gives rise to interference fields.

Procaine reduces fever. In infections with high fever, an → (T) intravenous injection can reduce the patient's temperature from over 39 °C to normal within an hour. In some cases, this means can be used to arrest the illness in its initial stages, complete with all attendant symptoms. In colds, the early use of a → (T) nasal spray with a mucosal anesthetic often proves effective. See also → influenza.

Thorough dental treatment and injections into the → (T) thyroid are often effective in fever of unknown etiology with an increased blood sedimentation rate.

Fibrillation, ventricular → ventricular fibrillation.

Fibromatosis, penile → penis.

Fibrositic nodules At the beginning of every neural-therapeutic treatment, the well-lubricated skin needs to be thoroughly palpated! By doing so, we are frequently surprised to find hyperalgetic nodules and bulges in the subcutaneous connective tissue of the lateral neck, the neck-shoulder area, paravertebrally in the anterior thoracic area, and superior to the sacrum. Those are so-called fibrositic nodules (gelosen, myogelosen). This cannot be confused with → muscle spasms that loosen up during anesthesia, whereas fibrositic nodules remain unchanged. The latter can be primarily found in the corresponding reflex areas of chronic and degenerative processes. Their formation is explained as a fixed disorder of plasma colloids. Metabolic roughage and potential difference causes a transformation from fluid sol to pathological gel. According to Preusser, this is a constant regulation-disturbing strain for the basic autonomic system, which takes place on the pathways between the nerve and the cell membrane. The formation occurs on viscerocutaneous reflex pathways. Reciprocally, they can have a negative effect on internal organs, joints, and regulation systems on dermatovisceral pathways. They fulfill all requirements for interference fields. By localizing and treating these nodules, we can enrich our diagnostic and therapeutic knowledge.

Therapy A fibrositic nodule will disappear simply by setting a → (T) quaddle directly above it. Larger amounts of nodules will soften and shrink. The tonus of the nodule environment will relax. If there is a muscular spasm, it will dissolve and the patient will report a general relaxation in addition to the local improvement. With considerable improvement of the circulation the pain vanishes. The effect is even greater if we inject some drops of a local anesthetic through the quaddle, 1 mm into the nodule, just like an → (T) intramuscular infiltration. This interrupts the disturbed reflexes, which have produced the fibrositic nodules and reverses the gel into the physiologic sol condition. If the treatment does not remove the nodules completely and permanently, any trigger may produce a recurrence of the condition. Thus, we have to record and control the location, number, and size of the nodules. For a differential diagnosis between fibrositic nodules and neuralgia, see → cervical syndrome.

Fingers (Heberden disease) Polyarthrosis of the distal interphalangeal joints with dorsal formation of two pea-size nodules formed by bone and cartilage growth at the base of the distal phalanx. This should not be confused with gouty tophi that are rounder and more distant from the joint. Bouchard nodes are not separated into two nodes and are the periarticular dorsal thickening of the arthrotic proximal interphalangeal joint.

Therapy Local injections in and around the → (T) joints or the Oberst method; also injections in the afferent → (T) subclavian or brachial artery and the afferent (brachial plexus, radial, median, or ulnar) → (T) nerves, possibly to the → (T) stellate ganglion. If this effort fails, one has to search for an interference field (tonsils, teeth etc.). See also → scalene syndrome. Injections into the fingers, especially the fingertips, are extremely painful, and the patient's hand must therefore first be securely fixed.

Fish-skin disease → ichthyosis.

Fissures, anal → anal disorders.

Fit, apoplectic → stroke.

Flatulence → abdomen.

Flora, intestinal → intestinal flora.

Flu → influenza.

Foehn disease This condition is the sign of autonomic tonus disturbance. It is usually accompanied by increased excitability and lowering of the stimulation threshold. Regardless of the individual situation, → (T) intravenous procaine solutions act to relax and reverse. In the majority of patients, however, balance is only restored by removal of an interference field. See also → neurodystonia, → thyroid, → weather susceptibility.

Fox–Fordyce disease → skin.

Fracture of the neck of the femur → femur, fracture of the neck of.

Fractures "Following an injection into a fracture hematoma, the local anesthetic diffuses all the way to the nerve fibers supplying the soft tissues in the region of the fracture, and to the nerves of the bone and periosteum" (Eriksson). After skin disinfection, slowly inject 5–10 mL into the hematoma. After about 5 minutes, the fracture can be manipulated into position with relatively little pain. This method is recommended in emergencies. In minor fractures, e.g., ribs,

fingers, toes, etc., first aid is given by injecting 1–2 mL into the fracture site to provide immediate freedom from pain. Repeat after 2–3 days if necessary.

In joint fractures and in fractures adjacent to joints but without dislocation (patella, olecranon, clavicle, upper end of humerus), infiltration around the fracture will promote early active movement and rapid healing without contractures or ankylosis. Animal experiments have proved conclusively that fractures treated with procaine or lidocaine heal better and more quickly. Procaine supplies the deficient voltage and restores the potential to normal, thus promoting the healing process.

In poor → callus formation we also inject close to the periosteum near the fracture or, better still, directly into the fracture gap. This also reduces the risk of pseudarthrosis formation. Leriche recommended this treatment as long ago as 1928 and praised it for improving the blood supply and more rapid callus formation, which he was able to prove to result from it. Further, early procaine treatment of a fracture and its associated functional impairment is a reliable means of preventing the autonomic deviation of post-traumatic → osteoporosis.

If callus formation is slow, if the fracture is painful for longer than the severity of the trauma seems to justify or if there is any other discrepancy between morphology and function, an interference field may be the cause. In such cases the fracture has allowed pre-sensitized regulating systems to deviate pathologically. We need always to bear in mind that any fracture site is a scar capable of becoming an interference field for other disorders.

Frigidity → pelvis, → sexual disturbances. For anorgasmia and frigidity, Mink recommends the injection of 1 mL of procaine bilaterally → (T) preperitoneally about halfway between the symphysis pubis and the anterior superior iliac spine.

Frontal sinusitis → nose.

Frostbite The current standard treatment for local frostbite consists of the rapid rewarming of the frostbitten part to 43 °C and the intravenous administration of dextran of low molecular weight. We add procaine to this. Procaine combats → shock and has a positive effect on everything to do with the blood supply. Stimulation of the blood supply is an urgent necessity and can best and most easily be achieved by "medical sympathectomy." This is possible at a very early stage, as soon as the frostbite victim is found and/or during transport, and consists in procaine injections into and around the → (T) afferent arteries and into the sympathetic → (T) ganglia supplying the affected parts. These can be given immediately and without misgivings even to seriously injured patients. Procaine (but not lidocaine or mepivacaine!) dilates the vessels, seals the capillaries, and prevents the formation of → edema:

1. *Upper extremities:* Intravenously (→ (T) intravenous procaine injections), → (T) brachial plexus nerves, → (T) subclavian or brachial arteries, → (T) stellate ganglion. Fingers and toes: repeated infiltrations around frostbitten areas, also small doses for the Oberst method.
2. *Lower extremities:* Intra- and periarterially into and around the → (T) femoral artery and nerve, injection into the lower → (T) sympathetic chain and/or the root of the → (T) sciatic nerve.

In third-degree frostbite of the lower extremities, injection into the lower → (T) sympathetic chain will noticeably promote demarcation, and injection into the → (T) stellate ganglion will do the same with regard to the upper extremities. The demarcation line is displaced distally by this treatment, i.e., severely damaged tissue whose fate is still in the balance and which would otherwise necrose will be saved. In the first stage of frostbite, injection into the sympathetic chain supplying the affected parts eliminates arterial spasm. In the second stage it restores vasomotor equilibrium, and in the gangrenous stage it extends collateral circulation. In follow-up treatment of severe frostbite, these injections relieve pain, circulatory disturbances, and hyperhidrosis. This was confirmed through experiences during World War II in Germany and the Soviet Union. See also → neurocirculatory disturbances, hypothermic shock: see page 211 (Gerecht).

Frozen shoulder → periarthritis of the humeroscapular joint.

Functional disorders We regard these as the preliminary step to organic disorders, which our insufficiently refined methods of investigation are not yet able to identify. We treat them as if we were dealing with an organic disorder.

Fungus infections of the skin → skin.

Furuncles Early treatment by infiltration of the surrounding healthy tissue rapidly relieves pain, demarcates necrosis, and allows the → inflammation to heal. In furunculosis, the site of the first furuncle often provides the clue as to which organ in the related segment is disturbed or acting as an interference field and thus weakening the defensive capability at the periphery. See also → abscess, → nose, → furuncles of the upper lip.

Furuncles of the upper lip In serious cases, injections to the → (T) stellate ganglion can be life-saving. See also → furuncles, → erysipelas.

G

Gallbladder, gallstones → abdomen.

Ganglion Synovial cysts tend to form on the back of the wrist. As long as they do not seriously inconvenience the patient, they ought not to be treated. They may be eliminated by strong pressure or a blow. Procaine injection into the cyst can break up the cystic wall. But the cysts frequently recur. Surgery is a relatively major operation and offers no guarantee against a recurrence. The simplest therapy is paracentesis and aspiration of the ganglionic contents, followed by the injection of a procaine solution and a tight bandage for several days.

Gangrene (diabetic, intestinal, senile) → intestinal atony, → frostbite, → neurocirculatory disturbances; → (T) femoral artery.

Gastric crises → tabes dorsalis. In genuine gastric crises, local anesthetics are often ineffective, but an attempt is always worthwhile. Apart from tabes, a remote disturbance due to an interference field can produce the → abdominal symptoms.

Gastritis → abdomen.

Gastroenteritis, infantile As a supportive measure for the customary treatment, inject 0.5 mL procaine intravenously (→ (T) intravenous procaine injections) or 1 mL around the → (T) brachial artery, plus a → (T) quaddle over the → (T) epigastrium and passing through this down to the peritoneum. Where the patient's life is at stake, inject into the abdominal → (T) celiac ganglion.

Gelosa → fibrositic nodules.

Genital pains → dysmenorrhea, → epididymitis, → pelvis, → sexual disturbances, → neuralgia, pudendal nerve, → prostate, → vaginismus.

Geriatric disorders See also Chapter 3, Part I, Section C on Rejuvenation With Procaine. Procaine cannot rejuvenate a patient. But premature aging and physiologically abnormal degenerative symptoms of all kinds are a disease and must be treated like any other chronic disorder. Aslan, Marx, and others have shown conclusively that procaine, even administered at random, stimulates both male and female sex-hormone glands and the suprarenal glands, and consequently halts the degenerative involution processes of the sexual organs. By the revitalizing action of procaine, senile changes in the skin were consistently reversed. We generally give 1 mL of procaine intravenously (→ (T) intravenous procaine injections) as the basic treatment, and → (T) quaddles and deeper injections in the segment of the principal disorder, e.g., in cerebral arteriosclerosis under the → (T) scalp, in senile emphysema over chest and back, in aortic sclerosis parasternally, in micturition difficulties into the → (T) prostate etc. Injections into the → (T) stellate ganglion produce active vascular dilatation in the brain, relaxation of vascular spasms, and an improved supply of oxygen. As a result, the degenerative process is halted. Dystrophies are eliminated to the extent that they are still reversible. In consequence, the symptoms disappear and functional performance is improved. Improved circulation comes with a pleasant cosmetic benefit: the facial skin tightens and looks younger. However, the best-intentioned segmental therapy fails if an interference field causes an early decline.

In some cases a series of injections to the → (T) thyroid can be helpful. Hoster pointed out that approximately 10 % of people over 60 years of age suffer from a thyroid disorder. Hypothyroidism may be the result of atropic autoimmune thyroiditis. Because local complaints are missing, the condition is frequently labeled as a "sign of old age." Indications include: unusual sensitivity to cold, edema around the eyes, non-specific "rheumatoid" complaints, immobility, fatigue, and changes that compare to dementia due to old age. Hyperthyroidism due to old age is hard to recognize: general weakness, hyperkinesis, hyperhidrosis, and hypermetabolism with intense weight loss and lethargy, combined with tachycardia and arrythmia can be indicative. Diarrhea and hair loss are usually not present. In cases of nodular goiter, malignancy (using sonography, scintigraphy, needle biopsy) has to be excluded in older patients. The risks of surgeries increase in older people. Thus, indications for surgery have to be carefully evaluated.

Senile gangrene see → neurocirculatory disturbances.

Gestosis → eclampsia.

Giant colon → megacolon.

Gingivitis → periodontosis.

Glaucoma → eye disease.

Glomerular nephritis → kidneys.

Glossodynia Exclude pernicious anemia, diabetes, vitamin B and iron deficiency. Inject a neural-therapeutic preparation to the lingual nerve, submucously to the retroglossal region, level with the third molar.

Glossopharyngeal neuralgia Chewing, yawning, and thermal stimuli can produce attacks of neuralgia on the affected side of the neck and throat, in the pharynx, tongue, tonsils, and radiating as far as the ear. Pressure on the tonsils, the pillars of the fauces, the lateral wall of the pharynx, and the posterior third of the tongue produces severe pain.

Treatment Injections to the → (T) glossopharyngeal nerve, or to → (T) tonsils and adenoids, the → (T) mastoid, and → (T) quaddles in the region of the base of the skull; also to the upper cervical or → (T) stellate ganglion. If the treatment is ineffective, find the interference field. See also → neuralgia, → neuralgia of the temporomandibular joint, → trigeminal neuralgia.

Goiter → thyroid.

Goiter, exophthalmic → thyrotoxicosis.

Gonarthritis → joints.

Gout Gout is ultimately the result of a regulatory disturbance that occurs in consequence of defective control in the autonomic centers of the diencephalon. The means described under → joints thus hold out good prospects of success in treating this disorder, since they tend to normalize defects of autonomic control if administered at the correct site. Of course proper nutrition and uricostatics are required.

Gracilis syndrome See under → (T) obturator nerve.

Granuloma annulare Infiltrate around and under the lesion. See also → skin.

Graves' disease → thyrotoxicosis.

Greenstick fracture → fractures; → rib, fractures, cracks.

Gynecological disorders → pelvis.

Gynecological dysfunction, autonomic This neurodystonic disturbance occurs in 5 % of all women and can account for half the patients attending a gynecological surgery session (Mink). It produces a regulatory paralysis that makes it impossible to change from a vagotonic to a sympathicotonic state and vice versa. The functional control defect presents the following leading symptoms: diffuse pain or discomfort in the lower or middle abdominal region. This is felt as a piercing or burning pain, an ache or soreness and appears to be uncontrollable. In spite of thorough examination, British gynecologists have reported no pathological findings in 63 % of laparoscopies performed on women with complaints of chronic pelvic discomfort. They called it the "pelvic pain syndrome." Merely varicose changes in the venous plexus around the uterus and the appendages were noted. This was interpreted as the result of a deviation by the autonomic regulation.

The common disease picture manifests itself in the following cardinal symptoms: pain on moving the cervix and pressure sensitivity of the posterior wall of the pubic symphysis due to reflex hypertonus of the myometrium. Ropelike parametric processes, pressure-sensitive tight uterosacral ligament, and muscle spasms of the fallopian tubes and the uterus that cause dyspareunia can be detected. In addition, the previously mentioned venous insufficiency and persistent cervical hypersecretion can be found. Many of the patients will already have undergone unsuccessful laparotomy on that account, on one or more occasions. Congestive hyperemia, as a result, is wrongly interpreted as "chronic adnexitis." "Complications with adhesions" are listed as the reason for further surgeries.

Therapy In addition to the regular gynecological examination, we test for sensitivity of the abdominal wall, because non-specific complaints in the entire abdominal area can originate in hyperalgetic areas of the abdominal wall. We approach this situation with → (T) preperitoneal infiltrations. We consider autonomic gynecological dysfunction, the "disease with 21 names," as a reversible functional disorder that can be treated successfully with regulation therapy. We give injections into the → (T) pelvic region and → (T) Frankenhauser's plexus, with particular health history → (T) intramurally. Also, injections to the lower → (T) sympathetic chain and in and to the → (T) femoral artery can be considered. In the course of the treatment, the pain diminishes soon, the indurated ropy tissue softens, and the usu-

ally small and rough uterus is loosened up, because the hormonal regulation also depends on impulses of the neurovegetative system. If segmental therapy fails, one has to search for an interference field. See also → pelvis.

H

Hair, loss of → alopecia.

Hallux valgus, inflammation of Infiltrate around and under the inflamed area as far as the periosteum, and repeat once or twice weekly if required. This chronic irritation can act as an interference field! In testing scars it is important not to forget those left by surgery of a hallux valgus.

Hay fever → nose.

Headache Obviously, before starting treatment, the neural therapist must ascertain that the condition is not due to space-occupying cerebral lesions (Case History 1, Part I, Section C, Chapter 1). See also → neuralgia. The treatment of headaches is one of the classic domains of neural therapy. It is so reliable and effective in all headaches of functional or organic etiology that one is justified in suspecting psychogenic causes whenever it fails to provide complete relief!

Therapy The standard treatment by which we can reduce the host of sufferers from chronic headaches consists of an → (T) intravenous injection of procaine or lidocaine, in conjunction with injections under the → (T) scalp. Intravenous injection is indicated in cases of causal or concomitant vasomotor dysregulation. In frequent vertical headache, an injection down to the periosteum at the temporal or parietal level on each side is generally adequate. A bony ridge can be felt two fingers' breadths above the middle of the maxilla, which is usually pressure-sensitive. It is always advisable to palpate the head very thoroughly before giving these injections and to inject to any particularly painful points and into all → (T) scars found in the segment. Avoid proceeding by rote and blueprint! We generally find that the → (T) nerve-exit points above and below the eyes and at the back of the head (infra- and supraorbital nerves, occipital nerve: → (T) nerves [afferent]) are pressure-sensitive. In this case, we infiltrate them directly.

If in sinusitis headaches the exit points of both the supraorbital nerves are sensitive, we generally also inject a few drops in the center to the root of the nose. These three points form the "anterior magic triangle" in acupuncture.

Frontal headache is treated with a quaddle set two fingers' breadth cranially to the root of the nose, superior to the horizontal line between the eyebrows. From there we infiltrate the area superior and parallel to the brows subcutaneously. We use 3 mL on the left and again on the right side. This disables both branches of the supraorbital nerve and the supratrochlear nerve, which supply the forehead up to the hairline.

In headaches that affect only the temporal areas, usually accompanied by overtiredness and disturbed vision or pain behind the eyes, → (T) quaddles set approximately on a line connecting eye and ear and injections down to the periosteum of the temporal bone have been found to give relief.

Occipital neuralgia presents with piercing, stabbing pains radiating from the neck up and forward over the dome of the skull. Again, the head should be thoroughly palpated before treatment and the injections accurately pinpointed on the pressure-sensitive points found.

An isolated headache above the right eye can indicate a disturbance in the region of the liver and gallbladder, particularly, if they occur after the consumption of certain foods (such as chocolate, cheese, sausages). See also → abdomen. If the scalp is painful over a circumscribed area of the skull or on the crown when the hair is brushed or combed, the → (T) tonsils are often found to be the interference field. Some forms of → migraine respond well to a para-arterial injection of the temporal artery. This can be readily located at its exit point in front of the ear, just above the zygomatic arch.

If the headache is the symptom of a ciliary → neuralgia, we have to inject into the → (T) ciliary ganglion. The leading symptom reported by patients is that "during an attack they feel like wanting to tear out their eye." In other therapy-resistant headaches, where the injections described above fail to provide relief, injection into the stellate or superior → (T) cervical ganglion and to the → (T) vertebral artery will help. Headaches following concussion and hypotonic forms, e.g., after lumbar punctures, will be amongst the most frequent in this category. The cause of post-surgical headache after intradural anesthetic procedures is most likely the draining of CSF through the puncture into the tissue. Thus, the use of thick needles should be avoided. Some dis-

eases will also respond to injections to the → (T) pterygopalatine ganglion or the mandibular nerve near the Gasserian (otic) → (T) ganglion, others will be relieved by injections to the → (T) nasal conchae or by local anesthesia with a → (T) nasal spray.

A persistent headache can make life unbearable, especially when, as is so often the case, it is accompanied by severe insomnia. In such cases it is worth trying literally anything, and even a → (T) cisternal procaine injection may be justified. (Case Study 16, Part I, Section C, Chapter 2).

Headache and migraine in women is often closely associated with the menstrual cycle and is then due to a hormonally conditioned sympathetic dystonia, which alters the autonomic state shortly before menstruation and changes the stimulus threshold, leading to increased pain sensitivity. Treatment consists in injecting into the → (T) pelvic region and → (T) thyroid. The former helps restore the hormonal balance and the latter serves primarily to reduce the patient's autonomic hyperexcitability. In all forms of migraines and headaches, we begin to search for an interference field if segmental treatment fails.

Hearing defects → ears.

Heart Cardiac disorders can present with pain, pressure or burning sensations in the associated Head's zones, by tightness in the chest, feelings of oppression, and anxiety states. The pain travels via the inferior cardiac nerve to the stellate ganglion, on to the thoracic ganglia, the communicating rami, thence via C3 to T4, to the spinal cord. The capillary spasm in the skin, which produces pain as a result of hypoxemia, can accurately mirror the circulatory disturbances in the cardiac region. Despite this, the severity and extent of the hyperalgetic areas do not always allow firm conclusions to be drawn as regards the seriousness and type of the organic disturbance concerned. According to statistics, some 40 % of the total population between the ages of 45 and 50 have coronary sclerosis. In Hochrein's view, the severity of sclerosis and the frequency and severity of angina pectoris by no means run parallel. According to him, only about 15 % of all patients suffering from coronary sclerosis also have angina pectoris. In other words, major anatomical changes do not constitute the main factor in a heart attack.

In the large majority of cases *angina pectoris* results from disturbed neurovegetative regulation of the heart. The hypersensitivity of the nervous system in the angina pectoris patient results in a lowering of the irritation threshold and hence in an abnormal increase in his or her proneness to spasm. Our task is to use neural therapy to arrest these abnormal reflex processes in the cardiac nervous system at an early stage and make them return to normal by using the normalizing effect of neural therapy. Any abnormal sensations in the region of the heart, the left clavicle, and shoulder should therefore be regarded as warning signals and be eliminated as thoroughly as possible at the earliest opportunity:

1. As basic treatment in all cardiac disorders we inject procaine or lidocaine intravenously (→ (T) intravenous procaine injections) into the left antecubital vein. Procaine is a beta blocker, which in addition has a quinidine- and sparteinelike effect on the heart in inhibiting the formation and transmission of irritant stimuli. Procaine also has an oxygen-economizing effect on the heart and is thus able to prevent angina pectoris attacks and cardiac arrhythmia caused by anoxemia. In severe cases, the injections can be given every half-hour.
2. The cutaneovisceral reflex zones of the heart are on the left side of the chest, to the left of the sternum, inferior to the left clavicle, over the left shoulder as far as the side of the neck, and along the arm, from the inside of the forearm to the ulnar side of the hand. On the back, they travel down to a point between the shoulder blades (C2 to C4, T1 to T6, left). We frequently find that the first acupuncture point on the heart channel (HT1) is unpleasantly pressure-sensitive. Starting from the upper end of the axillary fold, we go one fingers' breadth cranially and thence medially to the nipple line. If this point is hyperalgetic, we inject there left and right. If the → (T) sternoclavicular joint is pressure-sensitive, it can cause pseudo-anginal complaints. This is another reason for extremely thorough inspection and palpation of the thoracic area before injecting local anesthetics in the case of heart disease!

In cardiac pain, there is interaction between organ and periphery. This is often disregarded in therapy. The visceral and peripheral terminal vessels react jointly because they are linked together by segmental reflex-regulating complexes. We can improve the state of the peripheral vasomotor system by means of intradermal quaddles. If we repeat this treatment often enough we can eliminate these changes entirely. The positive cutaneovisceral reflex effect can then be seen in the ECG.

From the left brachial plexus (→ (T) nerves [afferent]), pain radiates to the left arm, particularly to the region supplied by the→ (T) ulnar nerve. We have to palpate these skin areas thoroughly, together with their underlying subcuta-

neous tissue and the corresponding intercostal spaces, the ribs, neck, trapezius, pectoral, and neck muscles, and even the area around and along the spine, in order to locate any points that are especially tender. This is especially necessary if there is a history of fractures of the vertebrae or their spinous or transverse processes. Costovertebral and→ (T) sternoclavicular joints can produce disturbing impulses that sustain the symptoms. These algetic points have to be treated with → (T) quaddles and deeper injections, if necessary going down to the periosteum and pleura. The area to the right of the shoulder blade has to be palpated with particular thoroughness. Fibrositic nodules and hyperalgetic points can be frequently found in this area. A long-forgotten accident, with contusion of the sternum, the xiphoid process and the lower portions of the thorax, perhaps a sudden blow from the handlebars of a bicycle or the steering wheel of a car, can have left behind a state of irritation that may now be affecting the heart via osteovisceral reflexes. We need to question our patients closely about this, and examine and treat them accordingly.

If the examination of the organs does not provide conclusive results, the case history gives an indication about the connection between the complaints and the skeletal system. The case history reveals the influence of body posture, certain movements, and positions on the complaints. As basic treatment we set two to four → (T) quaddles directly beside the sternum in the first to third intercostal spaces, over the pressure-sensitive points and further laterally into any fibrositic nodules found by palpation; these are often located between the ribs. If there is an increased and prolonged dermographic reaction on the left side of the chest, → (T) quaddles should also be set there and the → (T) thyroid treated. A further quaddle is set in the angle formed by the left lower edge of the thorax and the xiphoid process. If this point of the periosteum is found to be pressure-sensitive, it should also be injected. If an angina pectoris patient tells us that he or she has previously received a short, sharp blow in this region, we set an additional quaddle and also inject the → (T) epigastrium.

The intravenous injection and the parasternal quaddles constitute our basic treatment in all cardiac disorders. We always use these first, generally to very good effect, irrespective of whether we happen to be dealing with an angina pectoris, pseudo-angina pectoris, valvular insufficiency, a disorder resulting from cardiac catheterization, an injured myocardium, syphilitic aortitis, or cardiac neurosis. In all suitable cases this treatment of Head's zones effects a reflex improvement of cardiac performance, at the same time producing a dilatation of the coronary vessels. This benefits the pulmonary circulation and facilitates oxygen absorption. And this, in its turn, again benefits the heart. By treating the principal superficial hyperalgetic points, we thus also have an opportunity, as it were, of conducting the irritation, which causes the hypertonic heart muscle to go into spasm, from the deeper regions to the surface. The reactive improvement of the thoracic excursions also helps to reduce the precordial sensation of pressure. We cannot achieve any organic cardiac change by our therapy, but the heart's functional performance becomes more economical as a result of it.

All scars in the segment must be treated as hyperalgetic points, i.e., they must be injected at the same time. Special attention should be given to neck scars (e.g., from boils, carbuncles, injuries) and especially to scars on the left arm, hand, and above all the fingers! As the proverb has it: "Finger pain travels to the heart" (Case History 25).

The most powerful weapon in our armory for the segmental treatment of the heart is the injection to the → (T) stellate ganglion. Autonomic innervation, i.e., functional regulation and pain transmission, take place via this ganglion. Experience has shown that the right stellate ganglion is more important than the left for the innervation and regulation of cardiac function, since more of the accelerant fibers pass through it (Schmitt). This is of particular significance for reducing the heart rate in cardiac rhythm disturbances, for example, paroxysmal tachycardia. In angina pectoris, anesthesia of the stellate ganglion can correct the sympathetic hyperstimulation and restore the disturbed autonomic control to equilibrium. Hypertension and increased heart rate are symptoms of increased sympathetic activity following coronary bypass surgery and can be prevented by pre-operative stellatum anesthesia on the right.

In cardiac disorders, therefore, we always first inject the right-hand stellate ganglion and try the left only if this has been insufficient. The left may then be more effective. Care should be exercised in cases of cardiac and bronchial asthma bordering on the limits of decompensation, as there is then a risk of reflex cardiac arrest!

There is an important rule that experience has taught us: if the heart responds unequivocally to strophantin and other glucosides, procaine will not help. On the other hand, 30–40 % of strophantin-re-

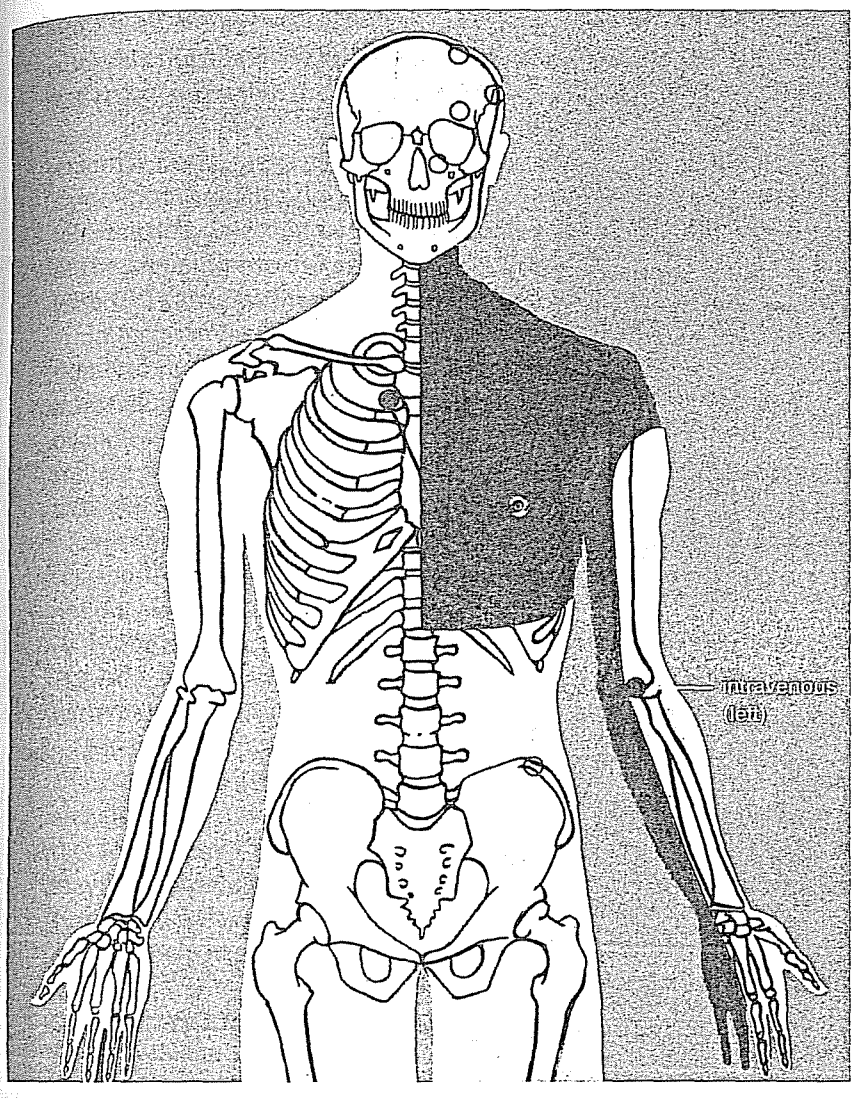


Fig. 2.5 Segmental therapy in cardiac disorders, anterior aspect.
● Standard points
○ Points where reactions are frequently obtained
▨ Segmental reactions possible

fractory cases react promptly and convincingly to procaine given intravenously (→ (T) intravenous procaine injections) together with parasternal → (T) quaddles.

Any diagnosed *myocardial infarct* should be treated only in hospital. But according to Hochrein, 40 % of all cardiac infarcts are symptomless. During an acute myocardial infarction, ventricular fibrillations endanger the patient's life during the first 4 hours. Even before transporting the patient to the hospital, every physician should instantly administer relative high doses of local anesthetics intravenously in an effort to remedy this critical situation. Taking 1–2 minutes, 3–5 mL of a 2 % procaine or 1 % lidocaine solution are given intravenously through an indwelling catheter. If effects subside, the injection may be repeated one to three times every 5–10 minutes. The therapeutic effect of this intravenous pre-injection prevents or stops ventricular fibrillation and tachycardia immediately. In an experiment, Bezold and Jarisch were able to prevent a collapse induced by veratrin poisoning, which is the clinical equivalent to a myocardial infarction, by injecting procaine intravenously (Hirsch). To cover the time of transportation to the hospital, 20 (–40!) mL of the longer-lasting 1 % lidocaine was administered intramuscularly (→ (T) intramuscular infiltrations) to the left deltoid and trapezius muscle. Contraindications: severe conduction defects, such as arteriovenous blocks (I-II) III, bradycardia, cardiac decompensation, and liver and kidney insufficiency. The arteriovenous block and bradycardia need to be considered alarming symptoms.

In the case of posterior myocardial infarction we give additional injections into the → (T) epigastrium and set quaddles next to the sternum and above the angle formed by the xiphoid process and the inferior thoracic margin.

In the case of lateral myocardial infarction we inject prepleurally to the left of the sternum. If pain in the forearm or fingers is present, we inject to the nail fold of the fourth and fifth finger. If the patient complains about shoulder pain, we inject to the pleura of the first intercostal space inferior to the left clavicle or to the cervical plexus (→ (T) nerves [afferent]).

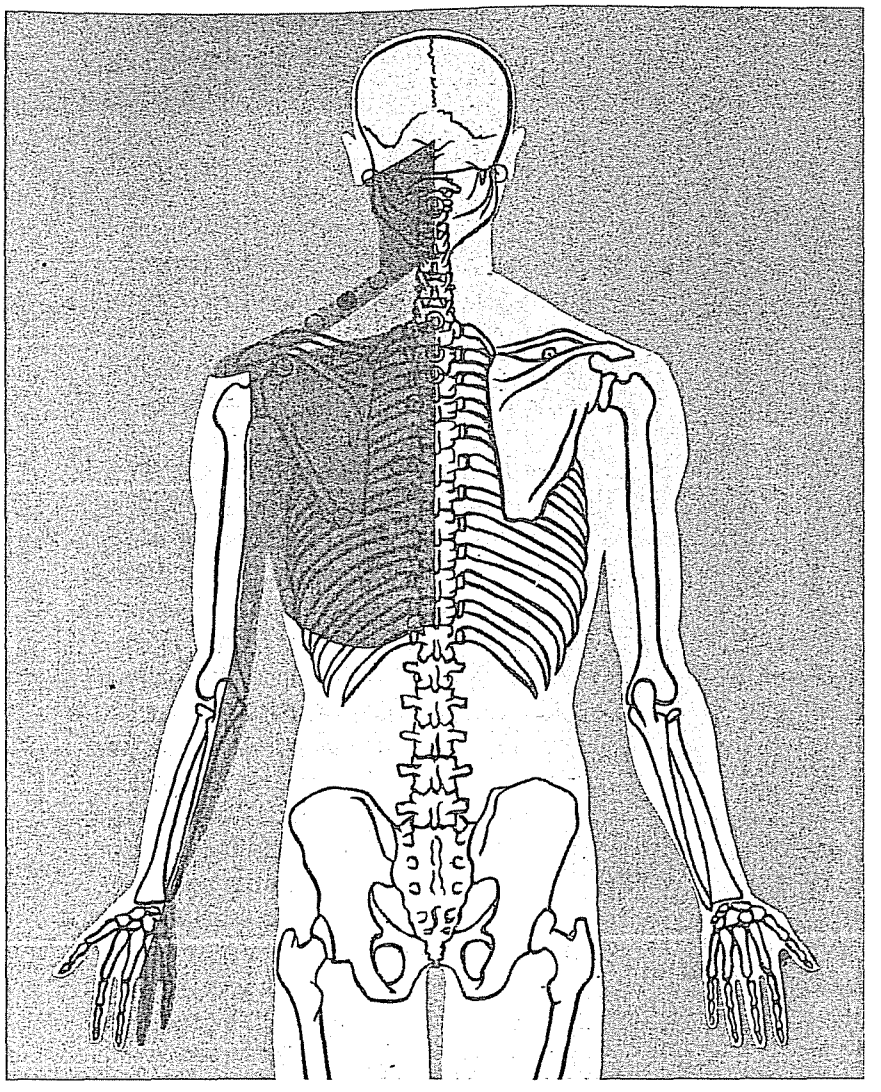


Fig. 2.6 Segmental therapy in cardiac disorders, posterior aspect.
● Standard points
○ Points where reactions are frequently obtained
Segmental reactions possible
Segmental reactions frequent

To re-establish normal autonomic regulation quickly, Leriche, Huneke, Schmitt, Siegen, and other authors explicitly recommend anesthesia of the → (T) stellate ganglion, even in the acute stage of the myocardial infarction. Hyperactivity of the sympathetic nervous system causes increased cardiac activity, which expands the area of infarction. The pain that is caused by the infarction can be eliminated through anesthesia of the stellate ganglion. In careless patients, this opens the door for re-infarction because they do not rest enough or overload themselves too soon. Killian warns against stellate injections in the acute stage. His concern is the deactivation of accelerator fibers.

If a patient who presents with anginous complaints is treated with injections, the CPK values (ceratinphosphokinase) are unstable during the following days. The values are increased for lesions of the peripheral and cardiac muscles. If necessary, the relevant iso-enzymes have to be determined in order to clarify the situation.

As a first-aid measure in recurrent coronary spasms, the patient should be advised to pinch the skin over the site of the pain firmly between two fingernails. The fresh, sharp pain seems to drive off the old and less severe one. This ancient piece of empirical lore about segmental reflex reaction has now been given a modern label, acupressure.

Ventricular cardiac arrhythmia and fibrillation often occur in conjunction with myocardial ischemia, particularly in myocarditis and cardiomyopathy with vascular occlusion. Further factors that may produce these are cardiac catheterization, mechanical irritation, and hypothermia in cardiac surgery, and electrolyte disturbances (hypokalemia) after prolonged use of diuretics, especially in conjunction with digitalis. The excellent results obtained in the prophylaxis and treatment of such ventricular arrhythmia by giving procaine and other local anesthetics (Xylocaine, Scandicaine, Xyloneural etc.) intravenously (→ (T) intravenous procaine injections) is explained by the fact that the local anesthetic acts as a beta blocker and fends off the excessive impulses from the sympathetic system, thus reducing excessive oxygen demand. As the labile cell membranes are stabilized, the formation and transmission of irritant stimuli is inhibited, cardiac rhythm is made more regular and cardiac perform-

ance becomes more economical. In other words, the stimulus threshold of the myocardium is raised and the risk of infarction therefore reduced.

In *cardiac arrest:* oxygen, artificial respiration, external heart massage, pacemaker, possibly procaine intracardially; the injection has to reach the left ventricle. Injection with 10 cm needle to the left of the xiphoid process sagittally, 9 cm deep; follow with 10 % calcium chloride (→ Table 3.4, Part III).

In *tachycardia* of uncertain etiology, try an injection into the → (T) thyroid, or intravenously (→ (T) intravenous procaine injections) and chest → (T) quaddles. Alternatively, an injection to the → (T) stellate ganglion is usually effective. See also → cervical syndrome.

In *endocarditis*, always arrange for a dental status and treatment urgently. In women who present not only with a stenocardial disorder but also with → dysmenorrhea, treat only the → (T) pelvic region. The cardiac and circulatory disturbances will vanish with the dysmenorrhea.

Interference fields cause approximately 30 % of all cardiac disorders! We can only help if we locate and eliminate this noxious influence! Where neural therapy remains ineffective, the heart condition may have a psychogenic origin, or its cause may be vertebral (→ cervical syndrome). Chirotherapy may possibly help in such cases.

Case History 25: Opera Singer, Aged 54

The 54-year-old renowned opera singer R. Sch. from Starnberg suffered a myocardial infarction during a beach vacation in 1969. On the day of the incident, in spite of being plagued by angina, he went swimming in the ocean, went for a run along the beach, played tennis, and went to the sauna. Obviously, even for an athletic person, that was a bit much all at once. There is too much of everything – even health! He was transported to an ICU by helicopter, which saved his live, and went through rehabilitation at a clinic for heart disease. The rehabilitation was not entirely successful and he was unable to work again. His autonomic regulation system was unable to compensate environmental stressors, such as changes in temperature and altitude, foehn wind and humid weather. Under these conditions he suffered from unpleasant anginose discomfort.

Therapy: The standard treatment, including intravenous injections and quaddles above the sternum and fibrositic nodules and even stellate injections brought no improvement. Testing the tonsils and devitalized teeth was without useful result. During the fourth treatment, anesthesia of a painless scar at the fifth finger, remnant of a Dupuytren surgery, caused a lightning reaction. I was petrified when he told me that he had gone right after the treatment (during humid weather) for several runs up and down the Isar embankment to test his newly regained vigor. He was able to perform as a tenor again and without relapse. In the course of 14 years of follow-ups, he participated with great success every year in celebrity ski races. The neural-therapeutic diagnosis is: condition after myocardial infarction and angina pectoris episodes caused by segmental interference field scar at the fifth finger on the left.

Heat stroke Immediately inject procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp at the level of the temples; possibly to the → (T) carotid artery.

Heberden's nodes → fingers.

Heel spur → calcaneal spur.

Hematemasis → abdomen.

Hematoma Depending on the size of the injected vessel or the cannula that was used, hematomas of various sizes may occur with every injection. Generally, they are harmless and do not require treatment. If the patient is worried, it should be explained that they act as reversant → (T) autohemotherapy. In → sprains and other → injuries, early intra- and subcutaneous infiltration around the affected area will prevent the formation of an extensive hematoma. This results from procaine's ability to reduce vascular permeability and its action on the blood supply, which is controlled by the nerves. Any existing hematoma should be treated similarly, together with an injection directly into the hematoma itself (skin disinfection essential!) to make it resorb more quickly and render it pain-free at once.

Hemicrania → migraine, → headache.

Hemiplegia → stroke.

Hemoptysis → lungs.

Hemorrhage from the lungs → hemoptysis.

Hemorrhage into the vitreous body → eye disease.

Hemorrhage, cerebral → stroke.

Hemorrhoids Itching and pain can be stopped quickly by superficial injections over and into the nodes and in their vicinity, repeating the treatment if necessary. The injections are somewhat painful but effective, because the tonus of the vessels and tissues is improved at the same time as the blood supply. It may also be necessary to infiltrate the anus outside the sphincter (insert finger to provide control) and

inject internal piles and fissures directly when found. → (T) Epidural anesthesia may also help. See also → anal disorders.

Hepatic coma → abdomen.

Hepatitis → abdomen.

Hereditary disorders Neural therapy is not indicated for the treatment of genuinely hereditary disorders, such as hereditary blindness or deafness. But we must differentiate between hereditary disorders and hereditary susceptibility. For example, if asthma appears frequently in a family, the weak organ (lung) and the tendency to bronchospasm is hereditary. One might say that the sword of Damocles marked "asthma" was already suspended over the patient's cradle. The two threads holding this sword may last a lifetime and despite his or her predisposition the patient does not fall ill. But if a first trauma severs the first thread and a trigger factor cuts the other, the sword falls and illness strikes. If the physician succeeds in identifying the first and second traumas and in deleting them from the stimulus memory by his or her procaine injections, the sword will once more hang by both its threads. The patient's predisposition remains, but he or she is symptom-free and the status quo that existed before he or she became ill is restored. Similarly, a predisposition to form dental granulomas, to chronic tonsillar changes, and any other interference field must also be seen as possibly due to inheriting a weak or susceptible organ. Consequently, the same illness will tend to occur with greater frequency in such a family, but this does not make it a hereditary disorder in the accepted sense. In other words, it is always worth trying to help the patient by neural therapy. The fact that regulatory dysfunctions may occasionally hide under the cloak of hereditary disorders is demonstrated by Case Histories 9 and 29.

Hernia, diaphragmatic → hiatus hernia.

Herpes corneae → eye disease.

Herpes simplex Intra- and subcutaneous injections → skin. Genital herpes: Infiltrations to the trunk of the segmental nerves L5 and S1 (→ (T) sciatica) and the → (T) pudendal nerve are generally more effective than local injections. To stimulate the immune system use → (T) autologous blood injections and → (T) quaddles in the spleen dermatome T10 on the left.

Herpes zoster This is a virus infection in the spinal or cerebral ganglion of the affected segment, which has become a point of least resistance. We should give this our attention and look for the cause of reduced resistance. In the ganglion, there is at first a hemorrhagic necrosis, and this is followed later by sclerosis of the connective tissue. The fibers of the spinal nerve begin demyelination. The thick myelinated fibers decrease and the thin pain-transmitting fibers that respond particularly well to procaine preponderate. This causes hyperalgesia as a result of hyperesthesia. Particularly in older patients, neuralgic pain may continue for a considerable time after the rash and blisters have disappeared. Zoster neuralgia of the first trigeminal branch is particularly stubborn. This condition bears the risk of a corneal → ulcer (→ eye disease), paralytic strabismus, and diplopia. Our prime task is to eliminate pain, improve circulation, and stimulate the metabolic process at the same time.

Treatment The sooner treatment is started the more effective it is. In the acute stage, we should treat the patient daily or on alternate days, can make him or her pain-free in about a week and prevent post-herpetic → neuralgia. But we can still help a good third of all herpes patients and those suffering from zoster neuralgia even a month after the onset of the illness.

A study made in 1977 in Dresden, covering 466 cases of herpes zoster, praised the effectiveness of neural therapy. It found that the rash healed quickly, acute neuralgia was less severe or could be stopped completely, and post-herpetic neuralgia either did not occur or disappeared (Hahnefeld).

We inject procaine intravenously (→ (T) intravenous procaine injections) on the affected side, together with → (T) quaddles in the area of the rash, and by subcutaneous infiltrations down to the → (T) intercostal nerves or use → (T) paravertebral anesthesia. Depending on the site, we also inject the → (T) stellate ganglion or give an → (T) epidural anesthesia. See also → infections.

Herpes zoster ophthalmicus → eye disease.

Hiatus hernia Surgery for this condition results in about 40% relapses. Neural therapy should be tried before surgery is undertaken. It consists of repeated injections of a local anesthetic into the left → (T) phrenic nerve in the cervical segment. This causes the hernial sac to relax and as the obstruction in the hernial track is removed the symptoms also disappear. The effect and duration of the improvement increases with each repeat treatment until it becomes permanent. If necessary, also inject into the abdominal → (T) celiac ganglion and the → (T) epigastrium. If this treatment is ineffective, the search for an interference field is still worthwhile, even in such a case.

Hiccoughs Hiccough is a reflex process, a clonic contraction of the diaphragm and respiratory muscles (intercostals). This leads to accelerated inspiration and ends with audible closure of the glottis.

Therapy Try a → (T) nasal spray, or an → (T) intravenous injection in conjunction with an injection into the → (T) epigastrium. In stubborn cases, also inject to the abdominal → (T) celiac ganglion or the left (and occasionally the right) → (T) phrenic nerve.

Hip (disorders, arthritis, arthrosis, pain) → joints.

Hirschsprung disease → megacolon.

Hoarseness We infiltrate the superior → (T) laryngeal nerves bilaterally or set a → (T) quaddle over the anterior edge of the sternocleidomastoid muscle, level with the thyroid cartilage (M10), penetrating about 5 mm. Further acupuncture points are CV21 and LI4. For the first of these, the needle is inserted close to the jugular notch of the manubrium sterni to a maximum depth of about 5 mm; the latter is on the back of the hand in the angle between the first and second metacarpals, and the injection is given at a depth of about 10 mm.

Hordeolum → stye.

Hormonal disturbances According to F. Hoff, organs have an active part in the initiation of all physiologic and pathologic processes, due to their metabolism. Central and peripheral regulation systems control organic function, which is specifically stimulated by their own and other organs' products of dissimilation. Organic and inorganic metabolic products that are released into the blood stream are involved in activities including maintaining chemicophysical constants such as isothermia, osmotic isotonia, isotonia of the humors and blood; also the maintenance of the ideal electrical cell potential. In this context, glands play an important role. It was demonstrated that they contain autonomic nerves that directly stimulate the release of hormones. Based on the reciprocal action of the neural coupling and the feedback of the glands, every glandular dysfunction directly affects the functions of other glands. The unit of the cybernetic ally regulated neurohumoral functional chain acts holistically, whether in a state of health or disease. Neural therapy affects this regulating system. Its extensive influence also shows in the case of hormonal disorders as the origin of disease. Once again, our daily practice confirms the theory.

The composition of all body fluids, including those of the endocrine glands, is dependent on impulses from the neurovegetative system. These are controlled from the diencephalon and the pituitary. Only rarely is the secretion of one gland alone disturbed. It is far more usual for the whole of the finely balanced interplay of all the endocrine glands to be thrown out of order. Hormonal, neural, and vascular processes are too closely interlinked. While the glands are still intact or capable of regeneration and only the receptors are blocked, we must use means as non-noxious as possible for priming the regulating impulses, designed to help stimulate glandular function and restore the organism's self-regulating capacities. In this way, we help to stabilize these systems and restore the neurohormonal equilibrium. Drugs, on the other hand, frequently inhibit the regulating functions and upset the control circuits. If we give our patient hormonal preparations to replace his or her own, the feedback system signals that the hormonal levels are adequate or even excessive, and the body's own production is consequently further reduced instead of being stimulated. If treatment continues long enough, the organism will altogether cease producing these hormones. The regulatory dysfunction is then moved to other control circuits, and thus makes it possible for secondary disorders to arise there. Hence, the systems become iatrogenically unstable and more labile instead of healthier. Our task is to unblock them and make them again capable of reacting, in order to enable the spontaneous healing powers to function again as far as possible and to remain permanently functional. To this end, our regulating therapy can stand us in good stead.

Therapeutic possibilities Aslan has provided objective evidence of procaine's stimulating action on male and female sex glands and the suprarenal glands, → (T) intravenous injections encourage central regulation. We also inject the regions of the obviously disturbed glands, e.g., in pituitary disturbances we inject the adenoids (→ (T) pharyngeal tonsil), in diabetes insipidus under the → (T) scalp, in diabetes mellitus we go into the abdominal → (T) celiac ganglion. When the thyroid is affected, we inject into the → (T) thyroid itself, and if the sex glands are involved, we inject the → (T) pelvic region or the → (T) prostate. If this treatment is ineffective, we have to find the interference field.

Hormone allergy → mastodynia.

Hot flushes Hot flushes and nightsweats during the menopause result from increased sympathetic activity. The thyroid tries to compensate the loss of estrogens by increased activity. When no hormones are added the receptors are no longer confused and the hot flushes and nightsweats disappear a year sooner than in patients who are treated with hormone prep-

arations. Estrogens act unspecifically in this regard, whilst neural therapy of the → (T) thyroid, if necessary in combination with injections into the pelvis, is specific because it creates hormonal balance. See also → pelvis, → menopausal disorders, → thyroid.

Housemaid's knee → bursitis.

Humeroscapular periarthritis → periarthritis of the humeroscapular joint, → joints.

Hunt's facial neuralgia → neuralgia.

Hydrocephalus interims Where the pathogenic cause is inflammatory, → (T) intravenous injections given alternately left and right, combined with injections under the → (T) scalp can be effective; also injections into the → (T) stellate ganglion or the superior → (T) cervical ganglion. A → (T) cisternal procaine injection may also be tried.

Hydrophobia → tetanus.

Hydrops → heart.

Hyperabduction syndrome, pectoralis minor syndrome This is a compression syndrome found mostly amongst those who work with their arms raised above their heads, such as painters, plasterers, electricians etc. The symptoms are pain, paresthesia, and disturbances in the arms reminiscent of Raynaud syndrome. In full abduction, the vessels and nerves under the coracoid process become overextended and are compressed by the lesser pectoral muscle. The pain is provoked by encircling the head with the arm, which is being rotated outward.

Treatment Infiltrate around and under the coracoid process, infiltration of the hypertrophic pectoralis minor muscles down to the periost of the third to fifth rib; in stubborn cases injections to (and into) the subclavian or → (T) brachial artery, into the → (T) brachial plexus and to the → (T) stellate ganglion.

Hyperacidity, hypoacidity → abdomen.

Hyperemesis gravidarum Early eclamptic toxemia can be treated with 1 % procaine solutions. It works well and is of no danger to the mother of the fetus.

Therapy First try procaine injections intravenously (→ (T) intravenous procaine injections) and into the → (T) epigastrium and → (T) thyroid. "Transient hyperthyroidism" was found in hyperemesis. This is what I describe as "latent hyperthyroidism" under → thyroid. Our strongest tool is the injection into the → (T) celiac ganglion, possibly alternating with injections to the → (T) stellate ganglion. This is only an extreme measure.

Hyperhidrosis If hyperhidrosis is localized, set → (T) quaddles and infiltrate subcutaneously. In children, excessive sweating of the head often indicates a tonsillar (→ (T) tonsils) interference field. In generalized hyperhidrosis, always look for the interference field if no other cause can be found. Also give → (T) intravenous injections. See also → neurovegetative dystonia, → lungs, → thyroid.

Hypermenorrhea, hypomenorrhea May be due to hyperfunction of the → thyroid. See also → pelvis, → polymenorrhea.

Hypersecretion from the cervix The hypersecretion of a glassy cervical mucus results from autonomic dysregulation. See also → pelvis, → gynecological dysfunction, autonomic.

Hypertension → (T) intravenous injections and procaine solution under the → (T) scalp will almost certainly eliminate the subjective attendant symptoms of high blood pressure, such as a feeling of congestion in the head, dizziness, and insomnia, without necessarily producing any lasting reduction in the patient's blood pressure. The lowered blood pressure reading immediately after an intravenous procaine injection results from the product's spasmolytic and beta-blocker action. In acute reflex hypertension, intravenous injections are generally inadequate. Injection to the → (T) stellate ganglion or of the carotid glomus is preferable in such cases. In other cases, a series of bilateral → (T) paravertebral anesthesias or injections to the celiac ganglion can have a consistent positive effect on idiopathic hypertonia.

In therapy-resistant hypertension, we find repeatedly that the blood pressure returns to normal only after an interference field has been identified and eliminated; it then does so within a very short time and with lasting effect. In hypertension in the young, look for the interference field. If the → (T) thyroid is enlarged, this should be injected at the same time.

Hyperthyroidism, hypothyroidism → thyroid.

Hypertrophic pulmonary osteoarthropathy → osteoarthropathy, hypertrophic pulmonary.

Hypoadrenalism → adrenal insufficiency.

Hypochlorhydria → abdomen.

Hypothalamic attacks Procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp, also into the → (T) stellate ganglion. Interference field?

I

Ichthyosis → skin. Merckelbach reported the cure of a generalized ichthyosis with a procaine injection into a small scar on the dorsum of the foot.

Icterus → abdomen.

Idiopathic epilepsy → epilepsy.

Ileus Unless due to mechanical causes (i.e., an occluding tumor), this is caused by a disturbance of the muscular tonus, either in the form of spasm or of → intestinal atony. According to Vishnevski, an injection into the abdominal → (T) celiac ganglion, bilaterally if necessary, helps so reliably in these forms of ileus that mechanical occlusion can be assumed to be present if the injection has not proved effective within 1–2 hours. With this treatment, he was able to discharge nearly half of the patients admitted with a diagnosis of ileus, without any need to resort to laparotomy. In addition to giving the injection into the sympathetic chain, Huneke's pupils also inject procaine routinely into the → (T) epigastrium.

This treatment can help up to a point even in cases of inoperable tumors. The inflammatory wall with which the organism surrounds the tumor is reduced to such an extent that the tumor is reduced in size, thus reducing the mechanical obstruction for a time, thereby improving the chances for surgery and, above all, the quality of life. See also → cancer.

Ilio-inguinal syndrome After heavy lifting, following athletic overexertion or prolonged standing, the patient complains of dragging, rheumatic, burning, or tearing pains on one or both sides of the lower abdomen, with the sensation that something is too short there. When he or she sits up without using his or her hands the pain increases and may radiate to the back and thighs. If in the absence of an inguinal hernia, examination shows nothing more than a pressure-sensitive point at the outer inguinal ring, there may be an irritation of the ilio-inguinal nerve.

Therapy The nerve exits two fingers' breadth medial to the superior anterior iliac spine, anterior to the muscles of the trunk, and passes through the internal oblique muscle. From there it runs distally below the external aponeurosis to the spermatic cord (uterine ligaments).

We set a → (T) quaddle over the point of maximum pain and infiltrate procaine in depth towards the inguinal ring. If pain recurs, the treatment is repeated. If this is not sufficient, inject two fingers' breadth medial and two fingers' breadth cranial to the SAIS, and give fanlike infiltration into the abdominal wall and under the fascia toward the inguinal ring. See also → penis, → psoas syndrome.

Immune deficiency Every neural-therapeutic measure that is able to normalize blocked control circuits can raise stimulation thresholds and strengthen the immune system. This is particularly the case with the elimination of interference fields.

Via phagocytosis, the red splenic pulp, its reticular cells and macrophages, is part of blood regulation, including erythrocytes, thrombocytes, bacteria, and tumor cells. The white splenic pulp of the spleen forms lymphocytes and provides immunological regulation of the blood. If a strong chemotactic stimulus can only be eliminated through the break up of cells, which releases the necessary ferments, cytolysis begins. At this point, oxydases, peroxydases, phosphatases, and proteolytic ferments from the segmented granulocytes get involved in defense efforts. Cytolysis of lymphocytes releases immunoglobulins.

We can stimulate the spleen by setting → (T) quaddles in the corresponding dermatomes ventrally and dorsally at the level of the 10th rib. The increase of leukocytes in the blood picture proves this stimulation. Even stronger is the effect of injections to the left → (T) celiac ganglion or → (T) paravertebral infiltration at the left T8 to T10. See also → fever.

Impaired hearing → ears.

Impotence The term "Leriche syndrome" is applied to the condition in which men with circulatory disturbances are partially or totally impotent. Michal, a vascular surgeon in Prague, proved by his surgeries that impotence is far more often due to a circulatory disturbance affecting the pudendal artery, where it leaves the internal iliac artery, than to psychological

factors. If the lower aorta is not completely blocked yet and surgery is not necessary or impossible, injections in and to the afferent arteries are helpful. Inflamed arterial walls and their environment send constant vasoconstricting stimuli. Procaine treatment would therefore seem to be indicated here, since this stimulates the blood supply to the → (T) afferent arteries (femoral, posterior tibial) and nerves (pudendal, paravertebral infiltrations [T11 to L3], to the sacral → (T) sympathetic chain, → (T) epidural or → (T) presacral infiltration).

A number of cases are also known of patients who have reported spontaneously that their hitherto undisclosed impotence had disappeared with the elimination of an interference field. Such was the case, for example, after celiac anesthesia, hepatitis, or with amebic dysentery as part of the health history. In the case of hypothyroidism, injections into the → (T) thyroid can be helpful. See also → hormonal disturbances, → neurodystonia, → sexual disturbances, → menopausal disorders.

Incontinence, fecal → encopresis.

Incontinence, urinary → cystitis, → enuresis nocturna, → pelvis, → prostate.

Inert labor → obstetrics.

Infantile gastroenteritis → gastroenteritis, infantile.

Infarction → heart.

Infectious diseases Ricker took the view that bacteria can never act as the primary cause of a disease unless there is first a disturbance present within the neurally controlled trophism, which will provide the environmental conditions and the culture medium for the bacteria to enable them to attack and to reproduce pathogenically. More recently, Puck, in the United States, has been able to mark viruses with a radioactive substance and to prove experimentally that viruses can attach themselves to cells and penetrate these only if the electrical potential of the cells has been reduced to a point that allows them to do so. Whilst psychological and physical trauma modifies this electrical potential to favor the pathogens, the use of procaine can restore the cell potential to normal and thus deprive the viruses of their culture medium. A state of health is produced by undisturbed regulatory performance. Interference fields cause the organism to function inefficiently by wasting energy. Hence they also weaken the body's defenses against infectious disease. Bergsmann has demonstrated that sensitivity to tuberculin toxin is dependent on interference fields. The proof was provided by the fact that when the interference field had been eliminated, the threshold with regard to tuberculin sensitivity was increased. Procaine can no longer decisively influence infectious diseases once they have reached an advanced stage.

Infections with high fever → fever, → influenza. See also under → eye disease, → herpes zoster, → pulmonary tuberculosis.

Infertility → sexual disturbances, → sterility.

Inflammation Acute inflammation is a physiological defense mechanism and we can have considerable impact on its course. In 1906, Spiess had stated that "inflammation will not develop if anesthesia can be used to eliminate the reflexes which emanate from the inflammatory focus and pass centripetally via the sensory nerves. By anesthetizing the inflammatory focus, an existing inflammation can be brought quickly under control and set on the road to healing." In short: when the pain disappears, the inflammation does as well. Acute inflammation is part of irritant stimulus processing and irritant stimulus elimination with the goal to reinstate the original condition. The usual sequence is as follows: leukocytic struggle—monocytic breakthrough—lymphocytic healing—terminal eosinophilia. If the causal noxious factor cannot be eliminated this way, chronic inflammation as a potential interference field results. All this takes place primarily in the unspecific interstitium, the basic autonomic system. The cell and humeral systems of the blood and lymphatic organs take part in this process (Pischinger). In the case of disturbed wound healing, a delimited chronic inflammation may form around matter that has not been broken down (foreign substances, denaturated substances of the body). Through exogenous stimulation, which includes our therapy, this condition can be reversed into the granulocytic or monocytic healing phase. If the stimulus cannot be eliminated, the risk of relapse exists. Neural therapy can break up stubborn situations and prevent or eliminate the formation of potential interference fields.

Boerhaave wrote: "I should be the world's greatest physician if I could provoke inflammation as easily as I can stop it." F. Huneke stated that "we can cure inflammation with Impletol, irrespective of where it is located and by what it is caused. This statement has so much actuality value that it can change the whole of the work of general medical practice."

Influenza All anti-pyretics also have an anesthetic ef-

fect. We obtain the same fever-reducing action by injecting a suitable local anesthetic intravenously (→ (T) intravenous procaine injections). Such an injection can work wonders in any acute infection with → fever around 39 °C (102 °F) by rapidly reducing the patient's temperature and causing the attendant symptoms to disappear at the same time.

Injuries Any closed or open injury sets off dystrophic vasomotor reflexes that can radiate far beyond the injured area. There they can produce changes that in turn can hinder the healing process. This is shown most clearly in → post-traumatic osteoporosis. Any reflex vasomotor dysfunction can be suppressed or reduced at the site of the lesion and made reversible.

Local anesthetics have proved invaluable in the treatment of recent and earlier sports injuries. No doctor who has to deal with these should ever be without them. So, for example, we treat → sprains with → (T) quaddles around the affected joint and then infiltrate through them fanwise down into the painful tissue, especially to the sprained parts of the tendons and capsule. By this means, we achieve immediate freedom from pain and prevent large → hematomas and → edema from developing. A firm bandage is then applied, using either an elastic bandage or, better still, an elastic adhesive bandage. This will generally be enough to get the patient home. No responsible sports physician will agree to treat fresh sports injuries with a local anesthetic if the patient simply wants to be fit enough to compete again, for he or she knows that previously damaged anesthetized tissue is all the more vulnerable to injury because the warning pain has been eliminated.

Pulled muscles and tendons are treated analogously by → (T) intramuscular infiltration into the painful area. By this means we can effectively eliminate pathogenic reflexes and prevent → contractures. By the local use of procaine we can also make small → fractures pain-free in a very short time. Infiltration around any fresh wound ensures that it will heal quickly and without complications. This also provides prophylaxis against → tetanus. In major, life-threatening injuries, procaine is a useful adjunct for preventing and treating → shock.

If, after trauma, pain persists longer than experience suggests it should in accordance with the seriousness of the injury, the cause (apart from psychological factors) may be found to be an interference field that has previously made the relevant regulating systems more labile.

Inoculations, complications after → smallpox vaccination, complications after.

Inner-ear deafness → ears.

Insanity → psychoses. Neural therapy is not indicated for insanity. Exceptions are certain forms of → depression and → schizophrenia.

Insect bites, stings (bees, wasps, hornets, ticks, spiders etc.) The immediate infiltration with a local anesthetic around and under the sting at a depth of 5–10 mm will prevent allergic reactions, edema, pain, and infection. In the case of scorpion stings, this also prevents the usual state of excitation. If the patient has suffered multiple bee or hornet stings and critical symptoms are present, procaine should immediately be given intravenously (→ (T) intravenous procaine injections) and the treatment repeated at quarter-hourly intervals if required. Consider bloodletting. If the site of the bite or sting is not visible any longer, we search for it with an instrument that measures the skin resistance. We can also set quaddles around the area and infiltrate it subcutaneously. Neural therapeutic infiltrations of the tick bite site can eradicate Lyme disease caused by the bite or by cyanotic congestion due to neurovascular paralysis (Croon). Most likely all possible complications that result from tick bite infections can be avoided by early injections under and around the site. See also → snakebite.

Insertion tendopathy → tendovaginitis, → periosteum.

Insomnia Insomnia as an apparently independent syndrome may be caused by the same regulatory disturbances and/or dysfunctions as → headaches and → vertigo. The fact that neither → psychogenic nor → neurasthenic insomnia will respond to procaine is useful for the purpose of establishing a differential diagnosis. We give procaine intravenously (→ (T) intravenous procaine injections) under the → (T) scalp and frequently into the → (T) thyroid. Often, we have to rattle the system several times to get the desired results. Do not give up too easily! If the search for an interference field remains unsuccessful (head foci?), we have to refer to psychotherapy. Acupuncture lists the following points:

- LI-19: (back of the head: posterior fontanel; caution: pregnancy!);
- BL-62: (two fingers' breadth inferior to the tip of the lateral malleolus);
- KI-6: (one fingers' breadth inferior to the tip of the medial malleolus);
- ST-36: (two fingers' breadth inferior to the head of the fibula, half a finger's breadth lateral to the anterior crest of the tibia);
- CV-6: (two fingers' breadth inferior to the navel);

- LR-9: (when the knee is completely flexed, the medial fold of the knee joint).

Insufficiency, coronary → heart.

Insulin lipodystrophy Atrophy of the skin following insulin injections: local infiltrations.

Intercostal neuralgia Schleich was the first to observe that an infiltration of the affected → (T) intercostal nerves allowed this disorder to be quickly cured. On occasions an → (T) intravenous injection on the affected side can further increase the effectiveness of this segmental therapy. In women, tight brassieres can cause intercostal neuralgia. During pregnancy, the mechanical pressure can produce the same result. Fractured ribs, herpes zoster, pleurisy, and painful swelling at the sternal end of the second and third rib can cause neuralgias. In stubborn cases, cancer may have to be considered as a possible cause. Interference field? → intervertebral disk, damage to.

Intermedian-nerve syndrome → neuralgia.

Intervertebral disk, damage to The range of symptoms extends from lumbago to transverse lesion of the cord. Genuine disk damage is always produced by both internal and external noxious factors that result in neurovasal reactions. Trauma is not the basic cause but merely acts as a trigger. Many permanent cures prove that only a very small percentage of patients suffering from a diagnosed "damaged disk" have a genuine prolapse of the nucleus pulposus or herniation of the fibrous ring. This diagnosis has become fashionable and is made far too often and without justification in cases of sciatica and spondylosis. Neural therapy can break through the vicious circle of pain, muscle contracture, ischemia, irritation of the nerve roots with consequential sympathetic irritation and changes in the spinal posture, resulting in further pain, increased muscle contracture, and so on; it does so by acting effectively on the site of the pain.

Surgery should be held in reserve as a last resort, here as elsewhere. Where there is any neurological dysfunction, referral to the neurosurgeon must not be delayed. A transverse-lesion syndrome with disturbances of the bladder and rectum following prolapse is an indication for an emergency operation. Obviously, it is essential first to exclude an intra- or extramedullary tumor as a possible cause. In postoperative pain following disk surgery, procaine is given into and around the scar and down to the periosteum; also → (T) paravertebrally. If this is unsuccessful, the bladder and intestine are first emptied and 2 mL 1 % procaine are then injected into the subarachnoid space and, after withdrawing the needle, a further 2 mL peridurally. The patient should be informed beforehand that there will be a temporary loss of sensation and of use of the legs. After the lumbar anesthesia has passed off (half an hour to an hour) the patient is again fit for the road.

Treatment See → backache, → cervical syndrome, → sciatica, → spondylolisthesis. Level diagnosis in disk sciatica: → sciatica; Table 3.**5**, Part III.

Intestinal atony, gangrene, obstruction, occlusion Animal experiments have shown that procaine given intravenously (→ (T) intravenous procaine injections) stimulates peristalsis. In simple cases an additional injection into the → (T) epigastrium will suffice to set intestinal function in motion again. The observation made by surgeons that intestinal paralysis does not occur after abdominal operations carried out under lumbar anesthesia prompted Ratschow to administer lumbar anesthesia in seven cases of ileus, resulting in four cures, two improvements, and only one failure. Apparently this injection manages to break a pathological vicious-circle reflex mechanism in the abdominal region. But for practical purposes, the injection into the abdominal → (T) sympathetic chain at the level of the upper renal pole is preferable, since it is much easier to administer and is at least as effective. Head's zones for the intestine, → constipation. → ileus.

Intestinal dysfunction → abdomen, → appendicitis, → constipation. In his animal experiments, Speransky irritated the base of the third ventricle and found that, amongst other symptoms, this produced intestinal bleeding and ulcers, not only of the stomach and duodenum, but also of the appendix and rectum. Strangely enough, all other parts of the gastrointestinal tract remained free of pathological changes.

Carbohydrate abuse can lead to colopathy (→ colon, irritable) with flatulence, gastrocardiac syndrome, and to constipation alternating with diarrhea. The causes have to be removed. An improvement can be achieved in the symptoms by → (T) quaddles over the descending colon and sigmoid and by preperitoneal infiltrations or injections to the → (T) celiac ganglion. See also → colitis, → colon.

Intestinal flora The intestines are not only part of the digestive system but also of the immune system and can be harmed by chemotherapy and antibiotics. It shows little medical understanding of holistic cybernetic interaction if these regulation blockers are used too frequently for merely symptomatic

treatment without compelling reason. On the strength of the results of her investigations, Dr. Aslan believes she is entitled to the hypothesis that procaine also acts as a biocatalyst that stimulates the intestinal flora to produce biogenic factors and that it forms fresh p-aminobenzoic acid in the organism. The body can convert p-aminobenzoic acid into folic acid and this is known to stimulate the development of biologically healthy intestinal flora. Dietetic and pharmaceutic efforts to restore a healthy intestinal flora can be considerably supported by injections to the → (T) celiac ganglion. An unhealthy intestinal flora damages the immune system and meets all the requirements for an interference field.

Intestinal spasms Pre- and intraperitoneal injections into the → (T) epigastric region and → (T) quaddles over the lower abdomen. If necessary, injection into the abdominal → (T) celiac ganglion.

Iritis, iridocyclitis → eye disease.

Irritable bladder → bladder, irritable.

Irritable knee → joints.

J

Jacksonian epilepsy → epilepsy.

Jaundice → hepatitis.

Joints, disorders of The pathological radiograph, which may, for example, show signs of → degenerative processes or calcareous deposits, is no contraindication for neural therapy, since it does not provide any evidence of the relationship of the symptoms to the changes that have occurred, but helps us primarily to exclude tuberculosis, fractures, and dislocations, all of which require other forms of treatment. We must be clear about the fact that it is impossible to explain and define a joint in purely anatomical and mechanical terms. It forms part of the living organism as a whole and can be subject to irritant stimuli emanating from some remote source. Thus, for example, in arthrosis of the hip and knee, we often find that there is an existing or earlier → thrombophlebitis. This must be regarded as a neural interference field, i.e., as a "scar within the segment," and be treated accordingly.

The avascular cartilage is fed by diffusion from the capsular tissue. If the blood supply to the capsule is disturbed, the cartilage will degenerate. The task of treating an arthrosis thus consists primarily in improving the blood supply to the joint capsule. Similarly, where the patient is suffering from arthritic pain that robs them of their sleep (i.e., when their blood pressure is at its lowest), there is ischemia of the tissues. Apart from providing a therapeutically significant relief from pain, a properly administered local anesthetic develops its proven effect of reactivating capillary activity and restoring normal tonus in the terminal blood vessels. In inflammatory joint disease, the aim of our injections is to break through the pathological reflexes.

Where single joints in the upper part of the body are affected, 1 mL procaine is given intravenously (→ (T) intravenous procaine injections) as the basic therapy, followed by → (T) quaddles around the joint, through which we then infiltrate in depth to pain points found earlier by palpation (→ (T) intramuscular infiltration). These points tend to be present in the surrounding musculature, the periosteum or at the points of attachment of the capsular and ligamentous tissues.

Humeroscapular periarthritis (Duplay disease, Duplay 1872) This term is often used to cover several shoulder aches, including scapulohumeral periarthropathy, chronically stiff shoulder (frozen shoulder), suprascapular-notch syndrome etc. We differentiate between the actual scapulohumeral periarthritis and the chronically stiff shoulder because they are two different conditions:

1. The actual *humeroscapular periarthritis* is based on degenerative processes that justify the term scapulohumeral periarthropathy. Calcification of the tendon-joint capsule apparatus takes place, which occurs in combination with tendopathy of the supra spinatus tendon and an inflammation of the interconnected subacromial-subdeltoid bursa. In addition to the painful limited range of motion and the pressure pain on the head of the humerus, it is the "painful arc" characteristic symptom of the disease that brings the patient to us.

   The shoulder joint is covered by the coracoid process, the acromion, and the strong coracoacromial ligament located between the two. The pain can be felt when the head of the humerus with the greater tubercle pushes against the ligament, and the soft tissue of the rotator cuffs that insert at the greater and lesser tubercle receive pressure. This happens when the affected person raises the arm up to 90° and moves it superior and posterior, for example, when putting on a coat. When the arm is raised further above the horizontal line, the structures slide under the ligament. Pressure and pain cease.
2. In Anglo-American literature, the *chronically stiff shoulder* is called "frozen shoulder." This is a fairly rare but usually protracted disorder. It begins after a light trauma and frequently occurs in connection with a medium → cervical syndrome, → osteochondrosis, or in hemiplegics. It starts with pain in the shoulder (deltoid muscle attachment). Within the first 3–4 months, the slightly limited range of motion increases in intensity with abduction, external, and internal rotation (whilst isometric tension against resistance is pain-free!). Pain increases when lying on the affected side and keeps the patient awake

at night. Inflammation and severe arthrotic changes in the shoulder joint do not take place with this condition. The joint space remains intact. Reason for the increasing stiffness is shrinking of the capsule with unknown etiology.

In the second phase, which lasts a similar period, the pain persists and radiates to the arm (shoulder-arm syndrome), which becomes useless. After another 3–4 months the shoulder "unfreezes" again slowly and the pain subsides. The patient regains the previous mobility completely or almost completely.

3. *Suprascapular-notch syndrome:* If patients complain about non-specific shoulder pain, compression of the → (T) suprascapular nerve due to tightness in the suprascapular notch has to be considered. Causes are direct or indirect trauma, long-term mechanical stresses, including playing tennis, gymnastics, painting, and such like. In the case of shoulder pain that cannot be exactly located and radiates down the arm, pressure pain superior to the notch (directly lateral to the superior center of the shoulder blade) can be an indicator. If the arm is raised to a horizontal flexed position and is pushed back toward the other shoulder, the pain increases (abduction phenomenon). Following the perineural infiltration of 3–5 mL of a local anesthetic in the area of the notch, the pain disappears. Repeating the injections one to two times per week will usually permanently remove the pain. In severe cases with atrophy of the shoulder blade muscles, this does not bring positive results. In this situation, the transverse scapular ligament needs to be surgically incised and the suprascapular nerve released.
4. *Dislocated shoulder:* After injecting into the empty acetabulum and to the → (T) suprascapular nerve, it is easier to reposition the dislocated shoulder. The shoulder is immobilized and later we inject around the joint. The focus is on the stretched hypotonic parts of the joint capsule and tendon apparatus as well as the muscles. Coming from the → (T) brachial plexus nerves, the suprascapular and the subscapular nerves supply the articular muscles. This is useful for follow-up treatments and improvement of tonicity in habitual dislocation.

Shoulder joint In examining the shoulder joint we must try to test each part of the joint separately:

1. The active movements provide us with information on all the contractile components that move the joint.
2. The passive movements tell us something about the state of the non-contractile tissues, i.e., capsule, synovial bursa, and the acromioclavicular joint.
3. The muscles and tendons can be tested individually by isometric muscle tension (against resistance, without change in the length of the muscle).

Segmental Therapy in Shoulder Joint Disorders

We follow the same motto: remove pain and allow movement, to avoid contractions and atrophies. Due to the complex anatomy and the reciprocal functions between joints, muscles, tendons, ligaments, nerves, and vessels, discomforts are often initially vague but soon encompass the entire shoulder-arm area, become painful, and considerably handicap the patient. Severe pain upon movement might require immobilization. In this case we use an abduction splint for a short period of time. Depending on the location and severity of the condition, we use the following injections:

1. Standard treatment is always an → (T) intravenous injection on the affected side.
2. In addition, we set → (T) quaddles above all painful areas that are either indicated by the patient or we find through palpation. All scars in the segment have to be treated as well.
3. → (T) Intramuscular infiltration through the quaddles down to painful tissue, myogeloses, fibrositic nodules etc. Through mere anesthesia of the muscle attachments around the arthrotic joint we will relax the reactive muscle tension and fixations, the vasospastic concomitant reactions, and the radiating pain. → (T) Preperiosteal infiltrations to the pressure-sensitive periosteum of the humeral head, such as:
   a. to the coracoid process (attachment of the short biceps tendon);
   b. to the greater tubercle (pointing laterally, to the attachment of the supraspinatus);
   c. to the lesser tubercle (pointing ventrally, to the attachment of the subscapularis);
   d. to the posterior head of the humerus (attachment of the triceps and the teres minor) but also;
   e. into the intertubercular groove to the long biceps tendon etc.
4. In the case of the "painful arc" produced by scapulohumeral periarthritis, we inject to the supraspinatus tendon and into the inflamed acromial bursa. For injection to the supraspinatus tendon, the patient puts the back of their hand onto their lower back. The internal rotation moves the greater tubercle of the humerus anteriorly and the pressure-sensitive tendon can be easily palpated and injected in the notch between the acromion and the greater tubercle. The anterior part of the tendon is affected if the painful arc is more severe with the arm raised and the palm of the hand pointing toward the ceiling. If it is more painful when the palm of the hand

points toward the floor, the posterior part of the tendon is affected. We infiltrate the attachment of the tendon with 2–3 mL through a quaddle, 1 cm caudally to the center of the acromion. If that does not suffice we infiltrate at the same location with a 6-cm needle almost horizontally until tissue resistance disappears and it feels as if the tip of the needle was in a void. The cannula is advanced another 4 cm until the tendon is reached; 3–5 mL are injected.

5. The inflamed synovial bursa between deltoid muscle and the outer surface of the humerus is painful when pressed in a caudal direction from the acromion. We find this with the needle and as soon as the patient reacts to pain we inject about 2–3 mL at a depth of 20–30 mm. If the patient is pain-free when lifting the arm, the injection was placed correctly and the condition evaluated adequately. If necessary, the injection has to be repeated once a week for several weeks.
6. When the joint is involved, intra-articular injection into the shoulder joint is used: → (T) joints.
7. Our strongest tool is the injection into the → (T) stellate ganglion. It is used when simpler injections do not succeed.
8. In all types of shoulder pain, both clavicular joints have to be palpated and treated if they are pressure-sensitive. Also, where the patient has pain radiating from the head via the trapezius area to the shoulder, which is exacerbated by passive abduction, we inject into the acromioclavicular joint.
9. The sternoclavicular joint is as important and as simple to infiltrate (→ (T) joints).
10. The suprascapular-notch syndrome requires injections to the → (T) suprascapular nerve.
11. → (T) Ponndorf's vaccinations can be useful in all types of joint disorders.
12. The most important acupuncture point in any type of joint disorder is TB5. The patient places their arm with fingers outstretched on their opposite shoulder. By bisecting the distance from elbow to fingertips we find this point on the radial side of the ulna. This is then quaddled on the extensor and flexor surfaces.
13. Here too, if all else fails, the search for an interference field is indicated and often successful. Because of the connection between the shoulder and C5 and C6, disorders of the thoracic and upper abdominal area can mimic shoulder disorders. For example, a pancoast tumor can be the origin for therapy-resisting pain. This rapidly progressing lung carcinoma has to be excluded through radiography.

Elbow joint It is considered an elbow-joint syndrome if a relapsing polychondritis of the cartilage at the radial head causes pain around the elbow, which radiates all the way to the dorsal side of the fourth and fifth finger. The radial head might also be the cause for a "tennis elbow" (→ epicondilitis). Generally, the pain is quickly removed through an injection into the → (T) joint. Resection of the radial head is rarely necessary.

Hip joint In disorders of the hip joint, the repeated injection of 2 mL procaine to the periosteum of the → (T) trochanter major will often suffice. Being near the surface, this is readily accessible, and this simple means will in many cases (if repeated often enough) be all that is required. In stubborn cases, additional injections will also be required to the periosteum of the iliac bone, above and dorsally of the acetabulum, occasionally also to the superior anterior iliac spine. Where severe pain is localized in the inguinal area, injection of 1 mL of local anesthetic to the periosteum of the pubic ramus can bring relief. An injection to the → (T) obturator nerve can also take us further. Eighty percent of the sensation of the hip joint is supplied by the obturator nerve; the remaining 20% is provided by a branch of the sciatic nerve or by an accessory obturator nerve. Voss's operation relieves pain in the hip joint by relieving internal pressure in the joint and involves severing individual muscles. Similar relaxation can be achieved without surgery by infiltrating a local anesthetic into the palpable chains of fibrositic nodules. When the anesthetic effect has worn off, after-pains may occur. These are genuine distension pains that can be kept to a minimum by injecting slowly. The effect of the injection should be assessed only once these after-pains have subsided, a day or two later.

Otherwise, we inject directly into the → (T) joint. → (T) Quaddles in the sacral region and bilaterally of the lumbar spine, with → (T) intramuscular infiltration and injections to the often percussion-sensitive spinal and lateral processes of the lumbar vertebrae can also help to eliminate the secondary fibrositic nodules and the muscular and bony hyperalgesia, which, in their turn, maintain active the reflex disturbance to the affected joint. This applies particularly to patients presenting with shortening of the leg. Now and again we may even have to go down as far as the root of the → (T) sciatic nerve or the homolateral lower → (T) sympathetic chain, and especially also the → (T) sacroiliac joint. Obviously, → (T) epidural or → (T) presacral infiltrations also need to form part of our armory in such cases, together with the injections to the → (T) obturator nerve, and into and around the → (T) afferent arteries and nerves.

Arthrosis of the hip that persists for any length of time will lead to arthrosis of the knee. It is therefore advisable to treat the knee with → (T) quaddles at the same time. In these cases, the extensor mus-

culature above the knee joint is noticeably hard. We probe in depth with a 40 mm needle, a hand's breadth above the patella. Shortly before reaching the femur, resistance is felt and the patient reports a sharp pain. We infiltrate a little procaine into this layer and follow through with a few drops to the periosteum. If all this fails to bring relief, it will be worthwhile looking for → psoas syndrome.

Knee joint *Arthrosis of the knee* occurs so often with → varicose veins and recurrent → thrombophlebitis that there is an obvious causative link between them. Thus, we always set a few intracutaneous → (T) quaddles over the varicose nodules and particularly over any thrombotic residues, with good results. If we want to provide effective treatment, we must always remember the facts taught by experience, namely that separate areas of pain can be in a mutual pathogenic relationship. It is therefore a good rule to inject wherever there is pain. In the knee joint, the hyperalgetic points are generally located on the medial and lateral collateral ligaments, and at the level of the interarticular space between the medial ligament and the patella, less frequently on the tibial tuberosity. In the case of knee pains that are exacerbated by walking downhill, there are often pressure-sensitive points at the head of the tibia (generally medially) caused by insertion tendinopathy. By probing through a → (T) quaddle, we look for the hyperalgetic points found by palpation in the ligamentous apparatus, the periosteum, and in the musculature adjacent to the joint. Obviously any fibrositic nodules and hyperalgetic points in the lumbosacral area must also be sought out and eliminated. If that is not enough, we also inject into the → (T) knee joint. Anesthesia of the → (T) obturator nerve can be effective because it supplies parts of the knee joint.

All these different measures enable us to achieve a distinct regression of the disorder and to improve the patient's mobility, provided that his or her condition is due to segmental factors. There will be no substantial changes in the x-ray findings; our aim is to restore the patient's functions!

This carefully pinpointed segmental therapy also eliminates the reflex stiffening of the joints resulting from joint disease, → fractures, → dislocations, → sprains, and closed → injuries, and makes it possible to start early mobilization. The elimination of pain, hyperemia, and reduced muscle tone interact in this and help to restore function before muscular stiffening and bony rigidity can occur. These means enable us to prevent atrophy of capsular tissues and ligaments, prevent contractures and especially to avoid the dreaded transition to → post-traumatic osteoporosis.

Here, once again, the principle applies that all our efforts in the segment are doomed to fail if the pathogenic impulses emanate from a remote interference field. If segmental therapy is of no avail, we have to look for the interference field. In polyarthritis (→ rheumatism), this is in fact where we would start.

Not even the worst x-ray picture should discourage us from attempting treatment. Often enough, x-rays show an advanced degree of osteoarthritis as a secondary diagnosis, of which the patient has been ignorant simply because his or her deformed joints are still pain-free and function satisfactorily. In these cases as in other pathological conditions, therefore, there must be another factor present before the patient becomes conscious of the processes that have taken place and he or she feels the pain and/or suffers the functional disability normally associated with the disorder. We can frequently prove this factor to be an interference field, and this we can eliminate. See also → cervical syndrome, → periarthritis of the scapulohumeral joint.

K

Keloids Procaine infiltrations into keloids at weekly or fortnightly intervals often produce excellent results. The addition of 100 units of hyalurinodase per mL of procaine solution may help to achieve these results more quickly.

Keratitis → eye disease.

Kidneys There is no kidney disease in isolation; there are only general disorders in which the renal symptoms are particularly prominent:

1. Acute or chronic inflammatory processes affecting the kidneys not only present with the well-known local disturbances but also produce a state of alarm in the higher centers of the brain. These result in abnormal neural stimuli affecting the organ and its vicinity. Thus, for example, the disturbed reflexes act via the viscerovisceral reflex pathways by a secondary irritation of the solar plexus (→ (T) celiac plexus) to increase the patient's blood pressure. These reflexes result in faulty control signals and may cause a complete breakdown of renal function.

   This is confirmed by the successful use of neural therapy. Procaine treatment at the earliest possible moment to the → (T) nerves (afferent), supplying the kidneys and of the associated Head's zones is able to block all these noxious reflexes and restore normal conditions. This is the only means that can prevent an acute inflammation from turning into a chronic condition that may result in renal atrophy. Once renal atrophy has reached a state of completed cicatrization with mature scar formation, neural therapy can no longer help. The part played by an interference field in any form of kidney disease is nowadays hardly contested. According to Volhard, as many as 95 % of all cases of nephritis are tonsillogenic.

   In glomerular nephritis, the first diagnostic step must always be a full and detailed investigation of the state of the teeth, and the teeth should be treated thoroughly and completely before any attempt is made to deal with any suspected focus by the blind use of antibiotics.
2. *Renal calculi (nephrolithiasis):* It seems certain that there is a form of nephrolithiasis that is entirely due to neural causes. Thus it has, for example, been possible to prove that the body regularly eliminates substantial quantities of colloids, spheroliths, and microliths in response to the severe nerve irritation produced by amputations of the thigh and by abdominal surgery. The irritation of the vagus in abdominal surgery can lead to reflex blockages in the excretion from the renal pelvis and thus cause the production of calculi. The idiopathic form of calculus formation is doubtless much rarer. For this, surgical denervation of the kidney or the excision of one of its poles has been recommended. We achieve the same and more by the repeatable injection to the → (T) sympathetic chain at the upper renal pole. By this we can eliminate the reflex, which has set off the production of renal calculi, at the reacting organ itself, prevent renal colics caused by calculi and thus provide the most reliable form of prophylaxis against any all-too-common relapse.

   Surgery to remove renal calculi that does not eliminate the original cause is of little use. The cause is likely to be an interference field. If the interference field is allowed to remain active, any new stress, however banal, an infection, a dental extraction, or any physical or emotional shock or stress can again prepare the way for the renewed formation of kidney stones and lead to a relapse.

   The passage of calculi through the ureter causes pain. This should be treated by means of → (T) quaddles:
   a. in the upper third: lateral aspect of thigh;
   b. middle third: genital and inguinal region;
   c. lower third: bladder region (strangury, tenesmus).
3. Large stones high in the renal tract must be removed surgically. Petkov recommends (in *Chirurgia* 1971;2, Sofia) that, before surgery to remove ureteric calculi that have become lodged in the distal portion of the ureter, an attempt should be made with a "periorificial Novocaine block." According to his report, he distributes 10 mL of a 1 % procaine solution submucously 2–3 mm laterally from the ureteric opening with the aid of a catheterizing cystoscope, using a

needle fixed in the ureteric catheter. In more than half his patients a subsequently induced diuresis resulted in the spontaneous elimination of calculi up to 10 mm in diameter.

Segmental Therapy in Renal Disorders

1. Procaine given intravenously (→ (T) intravenous procaine injections) has a reliable spasmolytic and diuretic effect and increases the tonus of the smooth musculature. In addition there are far-reaching central regulatory effects that cannot as yet be interpreted pharmacologically.
2. → (T) Quaddles with a local anesthetic in the ventral and dorsal Head's zones to alleviate pain and colic pain in the dermatomes T10 through L2. For a differential diagnosis of colic or inflammatory "acute abdomen," set two or three → (T) quaddles of double-distilled water over the area of severest pain. Following these painful injections, colic pain will disappear at once, whilst pain due to an inflammatory condition will persist.
3. Patients suffering from rheumatic disorders often have subcutaneous pressure-sensitive nodes in the sacral region at the level of S3, which indicate past disorders in the urogenital system. These nodules must be palpated and eliminated by → (T) intramuscular infiltrations. As they disappear, the remote disturbances that produced and maintained them in being will also vanish.
4. Injections to the → (T) sympathetic chain at the upper renal pole on the affected side, possibly bilaterally.
5. → (T) Paravertebral anesthesia at T10 to T12, L1 to L2.
6. The injection in and around the → (T) femoral artery has an effect on the urogenital system via the "transition segment" L2.
7. From acupuncture we have taken over the procaine → (T) quaddling of the posterior (i.e., dorsal) edge of the sartorius, about the middle of the inner aspect of the thigh, then passing through the quaddles to a depth of 40–80 mm.

Kissing spine (Baastrup) syndrome When two broadened lumbar spinous processes touch in hyperlordosis, the interspinal tissue is squashed. This leads to → osteochondrosis and periarthritis with → backache and hyperalgetic reactions to tapping and palpating the spinous processes.

Therapy With the patient bent forward, inject 2 mL between the spinous processes. Aspiration before injection (caution: CSF space).

Knee → joints.

Kraurosis vulvae This is a subacute dermatitis with progressive sclerosis of the skin. Kraurosis is regarded as precarcinomatous and a precursor of vulvar carcinoma. We look on it primarily as an atrophy of the vulva with painful and itchy fissures, in which we must try to improve the blood supply and nutrition of the skin. We can achieve this by using a very fine needle and first giving intra- and subcutaneous injections into the affected area. First, we might want to apply 5 % Xylocaine ointment. Whilst these injections are extremely painful, women suffering from this condition willingly submit to them, since the itching soon abates and the skin becomes more supple. If the treatment is repeated often enough, the hyperkeratosis may disappear completely. → (T) Quaddles may also be set in the reflex zones of the sacrococcygeal region, or these injections may also be supplemented by → (T) epidural or → (T) presacral injections, or by injections to the → (T) pudendal nerve. Ovarian insufficiency or the menopause may play a part in the etiology of this disorder, hence the treatment indicated under → pelvis may also apply. See also →skin.

L

Labor, labor pains → obstetrics.

Labyrinthine deafness, labyrinthine vertigo → vertebral artery compression syndrome, → ears.

Laceration of muscle → (T) intramuscular infiltration.

Lachrymal glands In inflammation, inject 0.5 mL procaine into the → (T) nerve-exit point of the infratrochlear nerve at the inner canthus of the eye. See also → eye disease.

Lack of concentration → (T) geriatric disorders, → arteriosclerosis, → neurovegetative dystonia.

Laryngeal nerve, superior → neuralgia.

Laryngitis → hoarseness.

Larynx In laryngeal pain, an x-ray of the lower wisdom teeth may provide enlightenment. Similarly, a procaine injection into this region may prove helpful. As long ago as 1906, Spiess was curing tuberculous laryngeal ulcers by repeated anesthesia of the → (T) superior laryngeal nerve. Edema of the larynx, ulcers, and pain in the area can be ameliorated or eliminated with injections to the stellate or superior cervical → (T) ganglion. These injections are also recommended as complementary treatment for larynx and hypopharynx carcinoma.

Lateral cutaneous femoral nerve → meralgia.

Lateral sclerosis, amyotrophic A cure via the lightning reaction following an injection into the tonsillar poles (→ (T) tonsils) has been described in several publications. → (T) Quaddles over the vertebral column and to the → (T) stellate ganglion. The vertebral column and teeth are first suspects in any search for an interference field.

Leg ulcer → varicose ulcer of the leg.

Lens opacity → cataract, → eye disease.

Leukemia Nonnenbruch wrote that relatively minor disturbances in the composition of the blood can return to normal when the interference fields to which they are due are eliminated. This has also been confirmed by others. The sites where the blood is formed and the centers that regulate them are parts of the whole organism and, like all other organs, they can be inhibited from functioning properly or prevented from doing their normal work if an interference field is present. See also → blood picture changes.

Leukoplakia, leukokeratosis Intracutaneous and subcutaneous injections. See also → skin.

Libido, abnormally low → anorgasmia, → frigidity, → pelvis, → prostate, → sexual disturbances.

Lichen → skin, → kraurosis.

Lip, furuncles of the upper → furuncles of the upper lip.

Lipodystrophy, insulin → insulin lipodystrophy.

Lipodystrophy, progressive This diencephalic and pituitary disturbance is treated with procaine given intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp, or to the → (T) stellate ganglion or the adenoids (→ (T) pharyngeal tonsil). Interference field?

Little disease → (T) intravenous injections, in small children para-arterially and under the → (T) scalp, have produced remarkable improvement in a number of cases. It therefore seems worth trying this harmless method, possibly also injections into the → (T) stellate ganglion.

Liver → abdomen, → hepatitis.

Lockjaw → tetanus.

Locomotor ataxia → tabes dorsalis.

Lower abdomen → pelvis.

Lues, cerebral → syphilis, cerebral.

Lumbago The sudden stabbing pain in the lumbar region is generally due to a prolapse of an → intervertebral disk between L5 and S1. The posterior longitudinal ligament, which has the task of retaining the disk nucleus, is innervated from the sympathetic system. In about 25% of all lumbar syndromes with prolapsed intervertebral disk, an interference field has made this ligament inelastic. The nerve in the ligament is compressed because of protrusion or prolapses and produces a reflex muscle spasm. An irritant condition affecting the joint capsules of the vertebral arc joints and the symphysis may also be causally involved.

The well-known symptoms are severely limited movement, the characteristic habitués and increased pain when the patient coughs, sneezes, or strains. Schubert method: when leaning forward with the upper body while the knees are extended, the distance between the spinous processes increases in healthy people. The distance does not change if the vertebral motor segment of the lumbar spine is blocked.

Treatment First locate the most percussion-sensitive point of the spinous processes with the knuckles and mark this. If it is very near the line of the iliac crest, this suggests a dorsal prolapsed disk that is pressing on the root of L5. If it is three fingers' breadths below the line of the iliac crest, the root of SI is involved. The extent of the muscle spasm can then be determined by pressure with the tip of the thumb. → (T) Quaddles set in this area, each about 10–12 mm in diameter, can greatly relieve the pain. We then insert a 60 mm-long needle about 20 mm from the most percussion-sensitive spinous process and infiltrate fanwise at depth into the spastic paravertebral musculature. From the same entry site we also go in perpendicularly to the skin sagitally until we establish bone contact and infiltrate the small spinal joints periarticularly. This is particularly indicated if the pain is exacerbated when the patient bends backward. As the pain is eliminated, the reflex-blocked lumbar musculature relaxes and the nerve roots are relieved. If the first posterior → (T) sacral foramen, → (T) sacroiliac joint, or symphysis is sensitive to pressure, they must be treated accordingly at the same time. As soon as the patient is free from pain, he or she should move about as much as possible.

If the treatment described above proves inadequate, the strongest weapon in our armory is the injection directly to the root of L5 or SI (→ (T) sciatic nerve). Chronic lumbago, which either drives the patient out of bed with pain early in the morning or occurs after lengthy periods of standing, sitting, or carrying something, is treated in the same manner.

If local treatment fails to produce results, we must consider the possibility of an interference field, which is responsible for the disturbed nutrition and degenerative changes of the longitudinal ligament and the fibrous ring of the intervertebral disk. After the interference field has been eliminated (teeth, tonsils, prostate, pelvis, old injection sites in the gluteal area etc.), the pain and limitation of movement rapidly disappear, probably because of reduction of intraligamentous edema and consequent tautening of the longitudinal ligament. In case of relapse, treatment can be repeated successfully from the same interference field. See also → backache, → pelvis, → rheumatism, → sciatica, → Fig. 3.**59**.

Lumbar myalgia → lumbago.

Lumbar puncture, headache following → headache.

Lumbosacral neuralgia → lumbago, → neuralgia, → sciatica. In stubborn cases, also try → (T) peridural injections.

Lunatomalacia → osteonecrosis.

Lung injuries → shock.

Lungs Normal therapy for bronchopulmonary disorders is generally limited to administering chemotherapeutic preparations and antibiotics to combat the pathogenic agents, in addition to anti-phlogistic and anti-spasmodic measures to deal with the symptoms. This is no doubt justified in the acute stage. In chronic processes, on the other hand, the organism's natural self-healing tendency is inhibited by regulation blockers such as antibiotics, corticosteroids, chemo- and psychotherapeutic drugs, by surgery and radiation treatment. Any interference field present is activated, since the stimulus threshold is lowered and the illness and its underlying interference field exacerbated. If functional disturbances in the thoracic region are being maintained by segmental reflexes or an interference field and consequently determine the clinical picture, treatment using local anesthetics in conjunction with neural therapy in its wider sense (i.e., including manipulative medicine, acupuncture, massage, skin-counter-irritation methods, breathing exercises, and climatotherapy) will be able to act more effectively on the disturbed regulatory mechanisms.

Local anesthetics are particularly suitable for disorders affecting the lung, because they possess a number of characteristics that are necessary in treating these. Procaine acts as a vasodilator and decreases capillary permeability, helps to regulate the blood supply, has an anti-phlogistic effect, reduces fever, is anti-hyperergetic and endoanesthetic, and

thus produces autonomic reversal as its end effect. Local anesthetics owe this to the fact that, besides their purely circumscribed anesthetic action, they are able to eliminate the permanent depolarization in the irritated areas and restore normal bioelectrical conditions, and thus to harmonize the out-of-tune circuits.

We give procaine as follows:

1. Intravenously (→ (T) intravenous procaine injections), alternately into the left and right antecubital fossa. This is the basic treatment for all pulmonary conditions. In incipient post-operative lung complications, we can give procaine every half-hour.
2. In addition, we set → (T) quaddles in the dermatomes C3 and C4, T3 and T5, bilaterally next to the sternum in the intercostal spaces, over the trapezius muscle at shoulder level and bilaterally between the lateral processes of the thoracic vertebrae (Figs. 2.**7**, 2.**8**).

   We have also adopted a number of acupuncture points: LU-1, which lies on the anterior paraaxillary line at the level of the third intercostal space (slightly laterally from the mid-clavicular line) and LU-2 above it in the second intercostal space. The Austrian lung specialist, Bergsmann, treated thoracic dysfunctions with a combination of neural therapy, acupuncture, and chirotherapy. He investigated their therapeutic effect scientifically and was able to prove by spirometry and x-rays that diaphragmatic movement and respiratory capacity can be improved from the acupuncture point BL-17 (between the lateral processes of the thoracic vertebrae T7 and T8). In his view, acupuncture points are "indicators of the regulatory processes." Further acupuncture points are CV-17 in the center of the sternum, at the level of the fourth intercostal space, ST-13, KI-27, and BL-13.
3. → (T) *Intramuscular infiltration:* The above list does not exhaust the entire armory available in segmental therapy. Any experienced neural therapist will first search for segmental reactions before giving any injections, since these will lead him or her with certainty to the most effective site and correct depth for the injections. Reflex spasms and edema in the interstitial connective tissue (nodules) can be located by picking up a fold of skin and letting it roll off progressively, or by letting the finger travel upwards over the previously oiled skin and noting any points where its pliability is different, where it cannot be readily pushed in front of the finger and the musculature is tender or painful and where spasm is palpable. In long illness, where there is circumscribed sweating in the area between C3 and T10, with skin atrophy, circumscribed loss of hair, and muscular atrophy, these indicate that there are reflex disturbances of innervation and circulation. Obviously, any such points must also be infiltrated.
4. *Bones and joints:* In pulmonary processes the sternum and some parts of the ribs are often pressure-sensitive. There may be a thickening of the clavicle and the constant hypertonicity of the muscles may even bend the spinous processes in the direction of the lesion, although the vertebrae themselves may show no other pathological changes. Percussion of the spinous processes with a reflex hammer or with the knuckles should never be omitted in such cases and will often help to locate latent hyperalgetic points and simplify diagnosis of the level of the lesion.

   The small inter- and costovertebral joints are not merely passive mobile connections, but active control elements of spinal reflex control circuits. If there is any pathological change in these joints, the receptors acting as measuring sensors send out alarm signals to the higher regulatory centers. By their mutual relationships with neighboring organs these are therefore influenced by them. Manipulative medicine repositions and mobilizes the joints and can consequently eliminate such disturbing reflexes. Our injections act in much the same way. From the front, we go into the sternocostal and the sternoclavicular joints, injections that pose very little technical difficulty. We then also go into the small vertebral joints in the back: the entry point is a fingers' breadth from the line of the spinous processes, then down at right angles. The needle should be about 50 mm long. After finding bone contact we distribute the anesthetic (always maintaining bone contact) fanwise periarticularly. In addition, we also treat the costotransverse joints, particularly if the spinous processes are found to be percussion-sensitive. For this, the patient is seated, his or her forearms crossed over his or her chest. We palpate along the rib in a medial direction until we reach the joint. The needle is inserted at right angles three fingers' breadths from the line of the spinous processes until we touch bone. At the end of the lateral process, we pass through the ligament between the thoracic vertebra and the attachment of the rib to reach the joint, where 1 mL is deposited.
5. Infiltration of the nerve roots can also take us a step further (→ (T) paravertebral anesthesia).
6. The → (T) stellate ganglion provides the autonomic innervation of the upper quadrant of the

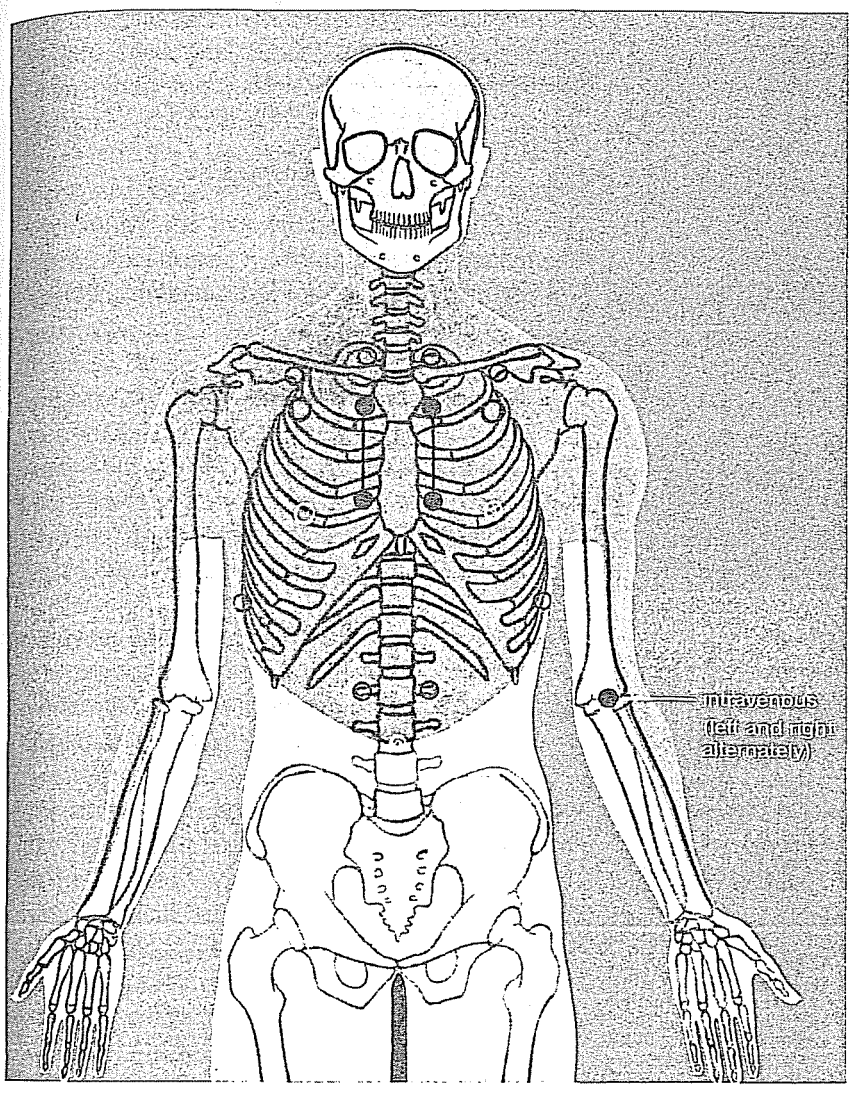


Fig. 2.7 Segmental therapy in disorders of the lung, anterior aspect.
● Standard points
○ Points where reactions are frequently obtained
▨ Segmental reactions possible

body. Anesthesia of this ganglion produces a substantial regulating effect on the lung. We can use this to advantage.

7. Injection to the carotid body, which is well supplied with receptors, can be equally effective. We find this at the point where the → (T) carotid artery divides.
8. For the sake of completeness, → (T) nasal reflex-zone treatment should also be borne in mind in the context of the pulmonary region.

If segmental treatment is ineffective, a search for an interference field is as appropriate here as elsewhere. In chronic lung disease we should always concentrate first on the region of the mouth, nose, and throat. In this, the pathogenic sequence teeth—sinuses—tonsils should be observed.

The injections (1) to (6) listed above should also be used in testing the thoracic region for an interference field if the patient's history indicates that due to earlier lung disease (e.g., whooping cough, pleurisy, pulmonary tuberculosis, pneumonia, bronchial asthma) there may be a possible interference field there.

Bronchial asthma From the viewpoint of neural therapy, asthma is not a diagnosis but merely the grouping of certain symptoms into a category. A diagnosis of "asthma" gives no clue to the cause of the disease and cannot, therefore, lead us to its cure. Asthma may be purely psychogenic, and in such cases only psychotherapy can help by providing the curative stimulus of words. If it is due to a deficiency of some of the body's building blocks, e.g., because one of the hormones is lacking, the deficiency must be made good. Often we reach our objective by segmental treatment, and, in these cases, the disorder has had a segmental origin. But often enough the culprit behind the scenes is an interference field, and then this has to be found and eliminated. It is not always easy to know by what road a particular case of asthma can be cured.

Segmental treatment Procaine given intravenously (→ (T) intravenous procaine injections) has a temporary bronchiolytic effect but is more effective when given as an aerosol (Zipf). One milliliter of 2% procaine solution intravenously (→ (T) intravenous procaine injections), together with four intracutane-

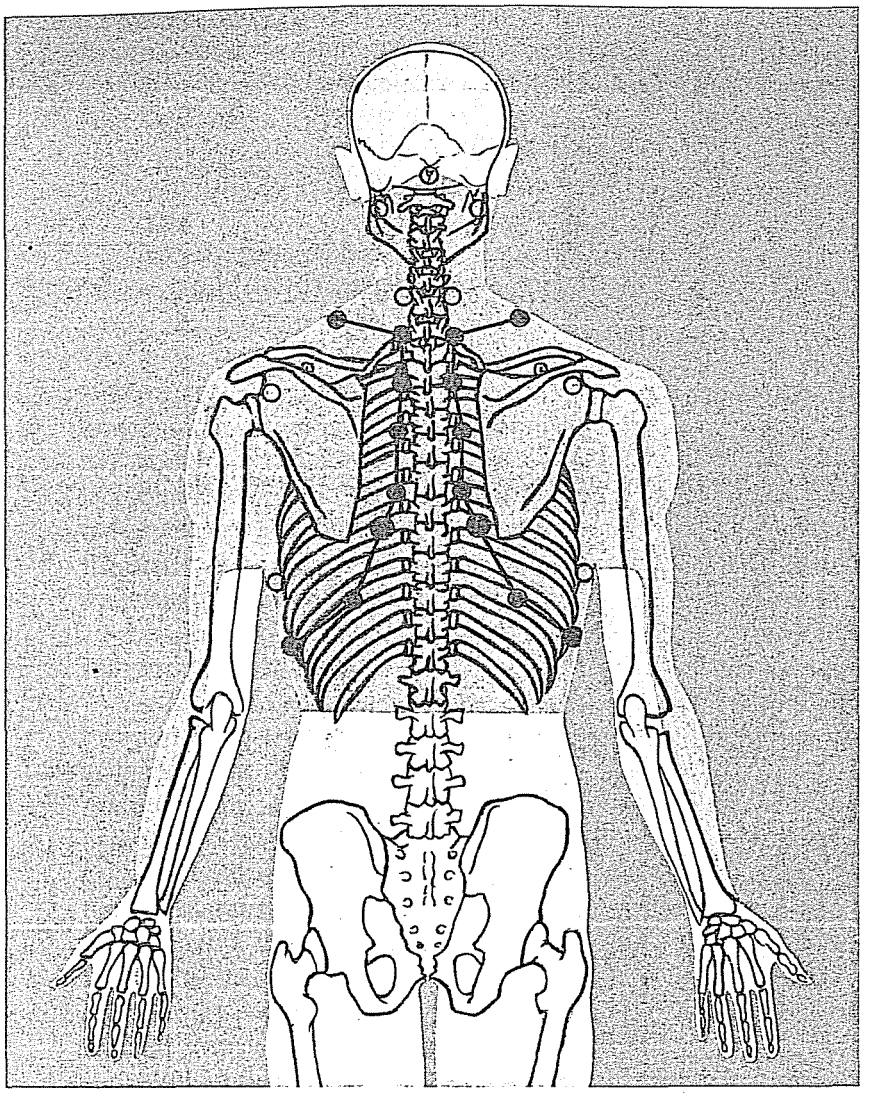


Fig. 2.8 Segmental therapy in disorders of the lung, posterior aspect.
● Standard points
○ Points where reactions are frequently obtained
▨ Segmental reactions possible

ous → (T) quaddles on either side of the sternum and about 12 quaddles over the shoulders and back on both sides of the thoracic vertebral column (Figs.2.**7**, 2.**8**). If the patient has a history (before the onset of asthma) of pleurisy and pneumonia, additional quaddles should also be set over the area of pleural thickening, perhaps even with deep injections down to the pleura and the → (T) intercostal nerves and/or over the lower edge of the lungs. An additional → (T) Ponndorf's vaccination in the segment can provide further support for this treatment.

In many asthmatics the nasopalatine space and the sinuses are also involved, since embryologically they and the structure of their mucosa form part of the respiratory tract. Chronic disorders of the sinuses are often odontogenic, since the root apices of the upper molars frequently penetrate into the maxillary sinus. This can lead to problems for the asthmatic patient and may require us to ask the dentist to extract even the last holding tooth in the maxilla. In this, we shall often meet with more resistance from our colleague than from the patient him or herself. In such cases, injections into the → (T) nasal conchae, to the → (T) pterygopalatine ganglion or a → (T) nasal spray should be tried. The most powerful weapon in segmental treatment is the injection to the → (T) stellate ganglion or to the upper cervical ganglion of the cervical → (T) sympathetic chain, which, in addition to its effect on lungs and heart, also acts on the higher centers of the brain.

Caution! Due to possible complications, stellate infiltration should not be or only very cautiously executed in clients with bronchial or cardiac asthma or emphysema with the risk of cardiac decompensation.

Injections to the → (T) vertebral artery may also be indicated. By giving these injections either separately or in combination, it is generally possible to reduce the tendency to bronchospasm and to raise the threshold for stress stimuli. If no lasting improvement is achieved, the interference field responsible will have to be found. In infantile asthma,

the first scar should not be forgotten: the umbilicus; second, there are the tonsils and tonsillectomy or adenectomy scars; also the ears. Excessively anxious and nervous mothers of such children should be treated at the same time. In their case, a few injections into the → (T) thyroid will reduce their hyperexcitability and this will benefit the child. In neural therapy we normally refrain from using chemotherapeutic products, antibiotics, and corticosteroids for prophylactic purposes and give these only in emergencies. This is a less risky and more biological approach than the constant administration of regulation-inhibiting drugs, which merely lower the body's defensive capacity and damage the intestinal flora. See also the case histories given in the section on Searching for the Interference Field in Chapter 2, Part I, Section C, Chapter 2 (Case Histories 10 and 13).

Emphysema Little change can be expected in the atrophied pulmonary alveoli in the terminal stage, when there has been extensive loss of elasticity. It is essential to start treatment early. Dyspnea and breathing capacity can still be improved through the above-mentioned injections. When injecting to the → (T) stellate ganglion, the Dosch technique has to be applied. When injecting on the level of the sixth cervical vertebra and applying pressure with the fingers, injury to the inflated lung apices and pneumothorax are impossible.

Pulmonary embolism In pulmonary embolism, the thrombus plays a subsidiary role compared with the ominous vascular spasms of the pulmonary arteries.

Treatment Procaine intravenously (→ (T) intravenous procaine injections), repeatedly if necessary, into the → (T) intercostal spaces over the affected pleura, and injections to the → (T) stellate ganglion and to (not into) the → (T) carotid artery, first on the affected side and then possibly also on the other.

Pulmonary hemorrhage (hemoptysis) This is often due to diapedetic bleeding, i.e., the extrusion of blood corpuscles through the vascular walls resulting from an inflammatory or allergic condition. Procaine given intravenously (→ (T) intravenous procaine injections) is effective against the → inflammation or → allergy and seals the vessels. In addition we set → (T) quaddles over the chest and back, as close as possible to the focal site. Massive, life-threatening pulmonary bleeding in tubercular patients can generally be arrested completely and permanently by injections into the → (T) stellate ganglion on the affected side, since this controls vascular action in the area involved!

Pulmonary injuries → shock.

Pulmonary tuberculosis Modern treatment of tuberculosis is directed primarily against the pathogenic agents that cause it. In addition to giving (regulation-blocking) tuberculostatic drugs, we attempt to strengthen the organism for its defensive struggle, by rest and good food. Often enough, such a passive, conservative approach merely helps the tubercle bacillus. But too little use is still made of the possibility of actively improving the neural and blood supply to the lungs, in order to stimulate their nutrition and tonus, and thus to make the substrate inhospitable for the pathogenic agents concerned. In our experience, → (T) intravenous injections, → (T) quaddles to chest and back and a series of injections into the → (T) stellate ganglion on the affected side or, where both sides are involved, alternately left and right at intervals of about a week, will help decisively to make the body's defenses more effective.

According to Russian reports from the Vishnevski Institute, its practice is to inject a local anesthetic → (T) paravertebrally and peripleurally in addition to giving tuberculostatic drugs. The evidence shows that this achieves a more rapid regression of the infiltrating processes and frequently causes the cavities to disappear completely. According to the authors, they need to give only three or four of these injections at intervals of not less than 1 and not more than 4 weeks. Dittmar succeeded in transforming exudative into proliferative forms by the injections described above, reducing the cavities and improving the patients' general condition. This method can also reduce dyspnea in any irreversible terminal state.

Bergsmann confirmed that we are right in demanding that in any chronic condition it is essential always to bear an interference field in mind as the possible cause of the disease process. He found that extrapulmonary foci such as chronic tonsillitis, scars, phlegmones, cholecystitis, hepatitis etc., can be shown to increase the susceptibility of the lungs to inflammation. Of 756 patients under treatment, there were banal extrapulmonary noxious factors present in 15.6%, which produced a deterioration of the pulmonary processes.

According to him, in unilateral tuberculosis due to an interference field there is a 90% probability that the lung on the same side as the focus will be affected. In unilateral pulmonary tuberculosis, there is a striking difference in the leukocyte count of capillary blood from the two shoulder regions. Bergsmann found that an interference field can disturb the tonicity of the respiratory musculature. After its elimination by means of a Huneke phenomenon the respiratory musculature and diaphragm relaxed and a previously therapy-resistant bronchospasm was cured. The difference in the leukocyte count then disappeared. In tuberculosis, the successful use of neural therapy can be measured

by the reduced tuberculin sensitivity of the patient and this permits important conclusions to be drawn as regards the reduced susceptibility of the lungs to inflammation. Two of the lightning-reaction cures described by Bergsmann are worth quoting, in the following.

A 58-year-old patient, who had lost the little finger on the left hand several years earlier, fell ill with pulmonary tuberculosis and cavitation occurred. After the scar on his other hand had been treated with procaine, a stubborn bronchospasm that had previously failed to respond to any form of treatment disappeared and the formerly therapy-resistant cavity began to decrease in size.

In the case of another persistent cavity that continued to increase despite 3 months of intensive treatment with tuberculostatic drugs, four treatments with procaine of the chronically inflamed tonsils produced a dramatic change within 18 days. At first, the cavity became transformed into a round focus, and this then healed with a stellate scar.

Pulmonary tumors (such as the pancoast tumor) These may produce pain in the bones and joints of the extremities. See also → osteoarthropathy, hypertrophic pulmonary.

We treat *silicosis* with a series of intravenous injections alternating between the right and left side, paravertebral and parasternal quaddles, and injections into the small vertebral joints. This allows us to considerably ameliorate the excruciating individual complaints and improve the respiratory ability. See also → emphysema.

Lung tumors → lungs.

Lupus erythematosis → skin.

Luxation Generally, periarticular procaine infiltration is sufficient to facilitate reposition of acute luxations! This also suppresses the formation of → hematomas. In recent cases, before reposition during anesthesia, additional injections should be carried out into the affected → (T) joints and → (T) intramuscular infiltration into myogeloses. This will promote quick recovery and prevent → (T) contractures. If follow-up treatments require it, set specific quaddles and give deeper injections at palpable hyperalgetic sites; also to the sensitive periosteum of tendon and ligament attachments. See also → dislocated shoulder.

Lymphedema A series of at least 10 treatments at about weekly intervals should always be tried. Especially in patients with swollen legs after → thrombophlebitis, the edema in the venous and lymphatic systems is generally rapidly eliminated. First we set → (T) quaddles around the affected limb. If the arm is involved, injections to the → (T) stellate ganglion are still more effective, whilst for the leg intra- and periarterial injections to the → (T) femoral artery and to the lower → (T) sympathetic chain or → (T) epidural and/or → (T) presacral infiltrations are indicated. Elephantiasislike swelling of the ankles in women may respond well to repeated injections into the → (T) pelvic region. After treatment, the patient should be allowed to rest for about 10 minutes. See also → lymphostasis.

Lymphostasis → lymphedema. Manual lymph drainage according to Vodder tries to reduce stasis in the lymphatic flow by special massage of the lymphatic vessels and thus to stimulate the flow of nutritive juices, and to activate metabolic functions and the body's defenses. We know that correctly sited procaine injections normalize all autonomic functions and thus also act on the lymphatic system. The vasodilator action is accompanied by dilatation of the lymphatic vessels. Injections into the fossa ovalis (→ (T) femoral artery), the → (T) pelvic region, and to the abdominal → (T) celiac ganglion can presumably, when necessary, make the three bottlenecks for the flow of lymph from the lower extremities and abdominal region (located above and below the inguinal ligament and at the aortic hiatus of the diaphragm) more readily passable. In the upper part of the body, the shoulder and supraclavicular glands and the thoracic duct are the main points. We deal with them all when necessary by an injection into the → (T) stellate ganglion.

M

Malnutrition (lack of protein), consequences of As a late sequel of starvation rations in prison camps, liver damage may occur many years afterwards (→ abdomen), with poor defenses against infection, "neurodystonia," and endocrine insufficiency. The disturbances in the neurovegetative regulating mechanisms are the most serious. The effect in later years can often take the form of tension in the sympathetic system. Most of the "functional" disturbances can be effectively treated with a carefully pinpointed procaine therapy.

Mammary eczema and rhagades This condition occurs particularly in breastfeeding. A few subcutaneous infiltrations can quickly give substantial relief.

Mandibular joint, neuralgia of → neuralgia.

Marie Bamberger syndrome → osteoarthropathy, hypertrophic pulmonary.

Mastitis With the first signs of puerperal mastitis, the physician has to explain the correct pumping of breast milk to the mother and treat the → rhagades at the nipples.

Therapy Procaine intravenously (→ (T) intravenous procaine injections) on the affected side, also into and adjacent to the infiltrates, and retromammary injections, the earlier the better! If these are not enough, the infiltrates may resorb after homolateral injections to the → (T) stellate ganglion. If the mastitis is referred to us only when the → inflammation has already reached the stage of→ abscess formation, the injections mentioned above will produce rapid demarcation and liquefaction.

Mastodynia In some women the breasts become tense and painful a week or two before menstruation. The breasts of sexually mature women are linked to the ovarian rhythm. In women suffering from mastodynia, sympathetic dystonia occurs before menstruation, with a lowered stimulus threshold, which results in increased pain sensitivity. Due to the change in the patient's basic autonomic position, there is also a tendency to → migraine or → weather susceptibility.

Treatment First exclude carcinoma as possible cause and then explain to the patient that her pain is harmless. Do not prescribe hormone preparations! Goecke pointed out that any hormonal allergy to proteohormones, which may lead to urticaria, angioneurotic edema, and a feeling of tightness in the pelvis, breasts, and nipples, responds well to procaine or lidocaine. We inject these intravenously (→ (T) intravenous procaine injections) and around the indurated area, possibly also retromammarily. Injections into the → (T) pelvic region and the → (T) thyroid will reduce the autonomic hypersensitivity.

Mastoiditis → ears.

Mastopathy

1. Chronic cystic mastopathy is a diffuse fibrosis with cyst formation. It can produce neoplasms on the glandular tubes, which can be extremely painful. In one of its forms the breast seems to be filled with shot pellets, full of small nodules, which can cause premenstrual disturbances.
2. *Treatment:* as for → mastodynia.
3. Spastic mastopathy occurs more often than the form described above and must be clearly distinguished from it and from mastodynia. In this disorder, it is not the mammary gland that is pressure-sensitive but the pectoral muscle above and behind the breasts. The women state that the pain radiates as far as the shoulder blades.

   Treatment: This condition may be due to a → cervical or thoracic vertebral syndrome, but it may also be caused by a very tight brassiere, which produces → intercostal neuralgia. In most cases a correctly sited infiltration into the affected pectoral muscle will be all that is needed, together with an explanation to the patient that her disorder has nothing to do with cancer.

Maternity → obstetrics.

Maxillary sinus → nose.

Median nerve, paresis of → (T) nerves [afferent], brachial plexus.

Megacolon *Anatomy:* via periarterial plexi around the branches of the celiac artery, the celiac plexus sup-

plies several abdominal organs. The celiac plexus is responsible for the visceral organs' sympathetic innervation, including vasoconstrictors, smooth muscle fibers, sectory fibers for glands, and fibers for visceral sensitivity. The celiac plexus continues caudally on both sides of the abdominal aorta as abdominal aortic plexus. From there it turns into the inferior mesenteric plexus, iliac plexus, and superior rectal plexus. The inferior mesenteric plexus regulates the movements of the transverse, descending, and sigmoid colon, to the superior part of the rectum.

In the case of congenital megacolon, the regulation between sigmoid colon and rectum is disturbed and the section will not relax but remains contracted. As a result, the rectum is empty and the colon portion superior to it is extremely distended. In the case of secondary megacolon, the rectum is filled and the person suffers from fecal incontinence..

Therapy Injection into the left abdominal → (T) celiac ganglion (sometimes into the right as well), together with → (T) quaddles over the inferior part of the descending colon and superior to the sacrum, possibly also → (T) preperitoneal infiltrations.

Melancholia → depression.

Ménière disease The labyrinth is an end-arterial organ without collateral blood supply. Consequently, any irritation of the sympathetic tissue of the afferent arteries can cause vascular spasms that reduce the blood supply (→ vertebral artery compression syndrome). Alternatively, autonomic vascular reactions may lead to labyrinthine edema with anoxia and pressure on the nerve cells.

Treatment Procaine is given intravenously (→ (T) intravenous procaine injections) and to the → (T) mastoid. It has been proven without a doubt that infiltrations of the → (T) stellate ganglion causes dilation of the labyrinthine vessels. Injections to (but not into!) the→ (T) carotid or vertebral artery work in the same way. Labyrinthine anesthesia: → ears, → cervical syndrome.

Meningitis, sequelae of → Weather susceptibility and irritability respond well to 1 mL of procaine or lidocaine given intravenously (→ (T) intravenous procaine injections) once weekly. If there is also a tendency to headaches, injections should in addition be given under the → (T) scalp. If there are symptoms of severe functional disturbances based on evidence of "central nervous stress," it may also become necessary to resort to → (T) cisternal procaine therapy, → neurovegetative dystonia.

Menopausal bleeding First exclude carcinoma. See → pelvis.

Menopausal disorders With cessation of estrogen production, most women begin to suffer from psycho and neurovegetative dystonia, such as → hot flushes, nervous irritability with anxiety and tension or depressive mood swings, circulatory disorder, nervous cardiac disorders, hyperhidrosis, fatigue, and other disorders that indicate a mild form of hypo- or hyperthyroidism. The → (T) thyroid tries to balance the deficit of ovarian hormones by secreting more of its own hormones. This disturbs hormonal balance even more, the sympathicus dominates, and the stimulus threshold is lowered. Substituting ovarian hormones is symptom-oriented therapy, which ameliorates the complaint but prolongs the duration. Only when the thyroid activity is reduced and ovarian activity is stimulated through neural-therapeutic injections, the physiological balance is recreated and a swift transition into symptom-free menopause can take place.

Therapy Procaine intravenously (→ (T) intravenous procaine injections), into the → (T) thyroid, and into the → (T) pelvic region.

Treatment of virile (male) menopause injections to and into the → (T) prostate, to the lumbar → (T) sympathetic chain, to and into the → (T) femoral artery, and with signs of hyperthyroidism also into the → (T) thyroid.

See also → geriatric disorders, → neurovegetative dystonia, → hot flushes, → hormonal disturbances.

Menorrhagia → pelvis.

Menstrual disturbances → hormonal disturbances, → pelvis, → thyroid. If disturbances are due to diencephalon-pituitary origins, injections into the → (T) stellate ganglion, adenoids (→ (T) pharyngeal tonsil).

Mental disorders → psychoses. Neural therapy is not indicated for mental disorders. Exceptions are certain forms of → depression and → schizophrenia.

Meralgia (paresthetic maralgia) Neuralgia of the lateral cutaneous femoral nerve is caused by toxic (for example alcohol, diabetes) or mechanical irritation (for example, tight clothes, overexertion of the abdominal muscles during work, sport, or pregnancy). This causes painful paresthesias with the sensation of soreness, tingling, or stabbing pain on the lateral aspect of the thigh, and possible resistance to extension of the leg due to pain. The pain increases when the hip is extended and decreases when it is flexed.

Therapy In general, anesthesia of the lateral cutaneous → (T) femoral nerve (repeated if necessary) renders

surgical neurolysis with severing of the constricting environment superfluous.

Metatarsalgia (Morton neuralgia) The symptoms are attacks of pain in the metatarsal area under the heads of the (second), third, and fourth metatarsals. Typically, the patient states that as they make a "rolling" movement with the shod foot they experience a sudden "electric" pain at which they would very much like to fling away their shoe. *Cause:* pressure on the plantar nerves due to fallen arches.
Treatment Injections into the painful nerves, change of footwear, or arch-support insoles.

Metropathia spastica → gynecological dysfunction, autonomic. Painful uterus without pelvic inflammatory disease, due to psychogenic reflex hypertonicity of the myometrium with consequent circulatory disturbances.
Treatment → pelvis, → gynecological dysfunction, autonomic; possibly psychotherapy.

Metrorrhagia → pelvis.

Micturition disturbances → enuresis nocturna, → prostate, → bladder, irritable.

Middle ear → ears.

Migraine In migraine, there is a tendency in the midbrain to respond to all kinds of stimuli and irritations. Hence it is a holistic disorder that can show a wide variety of symptoms: angina pectoris, paroxysmal tachycardia, asthma, and a flood of urine may all be migraine symptoms. It is therefore essential to seek the point of origin of the irritative stimuli to which the symptoms are due and to tackle the autonomic system specifically from the relevant zones. In this condition in particular, the culprit may well be an active interference field beyond the region of the head.

Migraine in children: 4% of all children already suffer from migraine, not merely from "cyclical vomiting," "periodic abdominal pain," or "meningism," as the wrong diagnosis so frequently suggests. Only half of these have a family history of the same kind. Often, only later developments give rise to the conclusion that these children who lay in bed deathly pale and complaining for hours were in fact suffering from genuine migraine attacks. A follow-up study made of migraine patients 20 years after their condition had first been diagnosed showed that some 75% had resisted all attempts at therapy and that the tendency to spontaneous cures is extremely small. Any doctor who thinks of migraine when he or she looks at a sick child and who learns to treat it at its root by means of procaine can thereby change the shape of the whole of his or her patient's life.

In childhood migraine, the proportion between the sexes is about 50:50 up to puberty, but afterwards about four times as many females suffer from it than males. A neural therapist will conclude from this that the female hormonal system plays a part in it. In these cases, regulatory problems arise when the patient switches from estrogens to progesterone and lead to a sympathetic imbalance, which lowers the stimulus threshold and increases their liability to attacks at the weakest point, which, in this case, is the neurovascular system. Neural therapy takes this into account.

F. Huneke discovered the therapeutic potential of procaine when he found he could arrest his sister's migraine attack with an → (T) intravenous injection. We shall be able to emulate this only rarely when treating migraine patients, but the → (T) intravenous injection should nevertheless always be given as our basic treatment, because of its reversant effect. In addition, and depending on what the patient tells us, there are also the injections into the → (T) nerve-exit points on the head (infra- and supraorbital nerves, occipital nerves) and the temporal points, which are always pressure-sensitive in these cases. All the personal points that the patient indicates must be palpated and included in the treatment. It is helpful that procaine acts as a pharmalogical histamine antagonist and beta blocker.

If the patient states that when he or she is suffering from an attack, he or she would gladly "tear out my eyes" because the site of the insufferable pain is behind the eyes, this suggests an injection to the → (T) ciliary ganglion. However, in certain cases, an anesthetic of the stellate, superior cervical or → (T) pterygopalatine ganglion or of the mandibular nerve near the → (T) Gasserian (otic) ganglion may take us further, whilst in others, an injection around the → (T) carotid or temporal arteries may be the only effective approach. The same also applies to the → (T) nasal spray. The migraine patient will generally lead us to the correct sites by their description of where they feel the pain and how the migraine attacks develop. We should also bear other possible sites in mind, such as the → (T) thyroid, the → (T) pelvic region, head → (T) scars, and other potential interference fields. If certain foods cause a migraine attack, we give a test injection to the → (T) celiac ganglion. In childhood migraine, interference fields of the → umbilicus, palatine, and → (T) pharyngeal tonsil, → (T) paranasal sinuses, → (T) teeth, and the cervical spine have to be considered. If it begins or increases for girls in puberty the → (T) pelvic region has to be considered first.

In therapy, it does make a difference whether we use the local anesthetic at the cervical sympathetic chain on the level of the → (T) stellate ganglion or the superior → (T) cervical ganglion. The following points give proof that:

- Periarterial plexi, coming from the stellate ganglion, affect the vertebral and basilar artery, as well as their supply area including: medulla oblongata, pons, cerebellum, occipital lobe, and basal parts of the temporal lobe.
- The internal carotid artery supplies the rest of the brain. The superior cervical ganglion is responsible for the sympathetic enervation of this artery.

When a migraine attack is already in progress it can generally no longer be arrested by our treatment. On the contrary, the patient may feel it to be particularly severe. But this should not be allowed to deter or irritate us.

Success in treating migraine is often not immediate but can be judged only in the light of further developments. The attacks become less frequent and less severe, and can be held in check with fewer and lower doses of medicaments. Our aim must be to free our patients completely from the pills and suppositories that are so often taken to excess.

The treatment of migraine is one of the special domains of neural therapy that (except for purely psychogenic cases) succeeds in curing in the majority of cases, provided that the patient has the required perseverance and the physician is an expert in the method. In migraine, as in so many disorders treated by neural therapy, there can be no blueprint on how to proceed. Every patient must be treated in accordance with his or her particular needs, and these can be elicited only if the relationship between patient and neural therapist is sufficiently close. Migraine that persists for any length of time places the psyche under very considerable strain and alters the patient's attitude towards his or her environment. Numerous therapeutic failures have sapped his or her courage. Well-meaning advice that he or she must learn to live with his or her affliction is empty talk that does not help the patient. Anything that acts as a psychological and organic stress factor and lowers the stimulus threshold allows the migraine to develop by passing that threshold. In the end, fear of the next attack is enough to provoke it. Our own confidence in our ability to help the patient, because it is based on the successful use of our therapy in similar cases, and the gratitude of those whom we have cured of their migraine by neural therapy and who talk about it freely to those still afflicted, will awaken new hope in the patient. This, together with the doctor's own personality, has a useful psychological effect. But this does not absolve us from the need to seek and find the right reaction points. (See Case History 6 in Part I, Section C, Chapter 2) See also → arteritis, temporal, → cluster headache, → headache.

Migraine, cervical Cervical migraine is produced by direct or indirect irritation of the great cervical sympathetic ganglia and by the effect of this on the → (T) vertebral artery by its surrounding autonomic fibers. The symptoms are often accompanied by anxiety and anginal disturbances. The condition is characterized by cracking noises in the spine and the sudden appearance of unilateral disturbances that are produced when the head or body are placed in certain positions. The psychological peculiarities of this type of patient are often the reason for their being classified as neurotics.

Treatment → cervical syndrome. A typical hyperalgetic point in this disorder is found above and on the spinous process of the third cervical vertebra. In therapy-resistant cases it may be necessary to consider whether the condition may be sufficiently serious to warrant → (T) cisternal procaine therapy. Interference field? Greater → (T) occipital nerve.

Milk crust → cradle cap.

Milk-leg This is a → thrombophlebitis of the femoral vein in conjunction with puerperal parametritis (→ pelvis) due to the spread of inflammation in the interstitial connective tissue. Injections to the neurovascular bundle of the femoral vein, → (T) nerve, and → (T) artery in the groin. In addition to these, injections to the lower → (T) sympathetic chain, or → (T) epidural or → (T) presacral infiltrations.

Miscarriage → abortion, → pelvis.

Monarthritis → joints.

Morton disease → metatarsalgia.

Mucoserous dyssecretosis → Sjoegren's syndrome.

Mucous membranes, catarrh of Chronic: reversant therapy with procaine given intravenously (→ (T) intravenous procaine injections) or by → (T) Ponndorf's vaccinations, appropriate segmental therapy or search for the interference field responsible. See also → ears, → nose, → parodontosis, → pelvis, → stomatitis etc.

Multiple sclerosis The Nobel Prize winner, Wagner von Jauregg (1857–1940), proclaimed that, "therapy is an empirical science" and "it is based on observation not on theory." He wrote in his monography:

"I start the treatment of every MS patient by the extraction of all bad teeth."

Gohrbrandt claimed to have witnessed cures or substantial improvements in 60 % of MS patients following injections into the → (T) stellate ganglion and abdominal → (T) sympathetic chain. We have been unable to confirm these favorable statistics and except for a sense of general well-being reported by them have witnessed only slight improvements in a much smaller percentage of patients treated in accordance with his directions. Especially in the advanced stage of bedridden patients, satisfactory results proved impossible to obtain. But the three lightning reactions produced and described by W. Huneke and Lampert show that even here there is no a priori reason to refuse to treat the patient, on the grounds that there is no prospect of success. However, in our experience, an interference field alone is only extremely rarely responsible for multiple sclerosis. On the other hand, it seems certain that an interference field always influences multiple sclerosis to the patient's detriment and accelerates the degenerative processes. We must assume that in the clinical picture of this disease a number of factors work together, that these may also include degenerative changes that can secondarily become active interference fields, and that several regulating systems may be blocked at the same time.

Treatment Scheffel reported that by improving the blood supply to the brain and spinal cord, anesthesia of the → (T) vertebral artery in MS patients favorably influenced the patient's ability to swallow, his or her speech, double vision, and other symptoms involving the eyes, and that his or her general state and depression improved as a result of this. We can improve the spastic gait by 1 mL of procaine injected into each of the patellar and Achilles tendons. Intra- and more especially para-arterial injections to the → (T) femoral artery and → (T) epidural infiltrations can improve blood circulation and the sensation of tension in the legs. These injections may also have a meliorative effect on bladder and intestinal functions.

It is a striking fact that, when → (T) quaddles are set over the sacral area of MS patients, strong reflex-like twitching in both legs is always produced. In our experience, this twitching is so characteristic of multiple sclerosis that it can be used as an almost infallible diagnostic tool, although we do not know the reason for it. Acupuncture recommends injections to the periosteum of the inner surface of the heel (calcaneus).

We must be careful not to expect too much of our therapy or of unduly raising the patient's hopes of the results of our efforts. He or she will in any event be grateful enough that something in the way of an improvement, however slight, is happening at all. But this should not mislead us into treating him or her too massively or too often (intervals of 3–4 weeks), since there is otherwise a risk of activating the disease. In assessing success or failure, extreme restraint is recommended because of the possible remissions and renewed exacerbations that are characteristic for this disease.

Mumps → epidemic parotitis.

Muscle spasm This reflex pathological increase of muscle tone is of considerable significance to us. Contractions and ischemia each stimulate nociceptors, which increases pain (positive feedback). Before starting treatment we locate it by palpation and mark the site with a felt pen. After setting → (T) quaddles and infiltrating procaine intramuscularly (→ (T) intramuscular infiltrations), we distribute the injected material by massaging with a circular movement. Muscle spasm and → fibrositic nodules in the interstitial connective tissue generally go hand in hand.

Muscular dystrophy (also after → poliomyelitis) Proof of increased muscular regeneration due to procaine now seems to have been provided (Aslan). Local → (T) intramuscular infiltrations, and injections to the → (T) afferent arteries and → (T) nerves and into the → (T) sympathetic chain can improve the blood supply to and nutrition of the muscles.

For all forms of muscle paresis, acupuncture recommends the "master point of musculature" GB34, also for muscle pains and cramp. This point is located on both sides in the dimple in front of and below the head of the fibula. See also → disuse atrophy.

Muscular exertion, strain, pain after → (T) intramuscular infiltration.

Muscular rheumatism → rheumatism.

Myalgia (myogeloses) The term "myogeloses" is misleading, since the → fibrositic nodules (geloses) are located in the interstitial connective tissue (→ (T) intramuscular infiltrations). For a differential diagnosis between fibrositic nodules and cervical neuralgia, see → cervical syndrome. Fibrositic nodules are sensitive to stretching; kneading, and rubbing affords relief.

Myalgia, lumbar → lumbago.

Mycosis Fungal diseases of skin and mucous membranes have increased considerably in the past dec-

ades. Fungal disease of the mucous membrane is always an indicator of a weakened → immune system! The intensity of the affliction allows conclusions about the intensity of the disorder. If worse comes to worst, it is combined with regulatory paralysis of the basic autonomic system and all its pathogenic consequences. Regulation blockers such as sulfonamides, antibiotics, corticosteroids etc. are ultimately "immunosuppressives." They harm the → intestinal flora and prepare fungal diseases of the intestines with toxic results. The intestine turns into an interference field and becomes the cause for immunosuppression.

Dermatomycosis → skin. A number of my patients who were tested with procaine independently of one another for other disorders reported spontaneously when they came for their next treatment session that a foot mycosis that had remained therapy-resistant and had afflicted them for years (but which they had not mentioned) had cleared up surprisingly quickly and completely within a few days of the tests. This observation allows the conclusion that an interference field, by reducing the blood supply, can also prepare the ground for foot fungus to take root and thrive, and that the fungus is deprived of its substrate, the cold moist skin, when the interference field is eliminated. Thermography can demonstrate this convincingly! Anti-myotics attack the fungus and neural therapy abolishes the environment for fungi and bacteria.

Myelosis, funicular Apart from treating the anemia, injections should also be given to the → (T) stellate ganglion or the abdominal → (T) celiac ganglion. Interference field?

Myocardial disorders → heart.

Myogeloses → fibrositic nodules, → myalgia.

Myositis, ossifying The painful → inflammation that precedes ossification can be eliminated by → (T) intramuscular infiltrations. Obviously, we must also ascertain at an early stage whether this centrally controlled dysfunction occured due to an interference field.

Myotonia congenita (Thomsen disease) The Dutch physician, Merckelbach, succeeded in curing a 10-year-old congenital myotonia, confirmed as such by several university hospitals, simply by injecting procaine into the tonsillar poles (→ (T) tonsils). Such individual observations confirm Huneke's thesis that any chronic disease may be due to an interference field. In any chronic disease that has failed to respond to conventional therapy, it is therefore worth looking for an interference field. It is worthwhile making 99 such tests in vain if we can produce a cure on the 100th occasion!

Myxedema → thyroid.

N

Nasal furuncles → nose.

Nasociliary neuralgia → neuralgia.

Nasopharyngitis → nose.

Navicular disease → osteonecrosis.

Neck boils → carbuncles.

Neck of the femur, fracture of → femur, fracture of the neck of.

Neck pains → cervical syndrome.

Necrosis, incipient (e.g., following accidental paravenous strophantine injection) Immediate infiltration into and around the affected site with 1–2 % procaine solution. See also → allergies, → neurocirculatory disturbances, → osteonecrosis, → varicose ulcer of the leg, → vascular occlusion.

Neoplasm → cancer.

Nephremia → kidneys, → heart.

Nephritis → kidneys.

Nephropathy → kidneys.

Nervous bladder → bladder, irritable.

Nettle rash → urticaria.

Neuralgia Neuralgia generally presents as severe spasmodic pains in the area supplied by a sensory nerve. They continue for only limited periods, a few hours at the most. It is characteristic of this condition that the pain is never accompanied by any objectively demonstrable sensory or motor loss. Neuralgias should be addressed at the root of the nerve because the area where the pain is felt does not correspond with the area where the pain originates. As far as possible the cause should be sought and eliminated (interference field, toxins, diabetes). Pseudo-neuralgias of the sciatic nerve, lateral cutaneous femoral nerve, or intercostal neuralgias of the costal arc can be found in pregnant women due to pressure or metabolic imbalances. They all respond well to the proper injections:

1. *Anococcygeal neuralgia:* See → coccygodynia.
2. *Auriculotemporal neuralgia:* This form occurs generally following injuries to the parotid region. Its symptoms are burning pain in the temporal region and in front of the ear, which is produced by chewing or hunger, and is accompanied by excessive secretion from the sweat glands in the area supplied by this nerve (gustatory sweating). Treatment consists of infiltration around and under the injury → (T) scar, → (T) quaddles in the area of the ear and parotid, → (T) mastoid process, → (T) stellate ganglion.
3. *Carotodynia (sympathalgia, deep prosopalgia):* Dull, boring pain in the region of the eyes, temples, maxilla, ears, and neck. The exit point of the supraorbital nerve, the eyeball, the region of the mastoid process, and the carotid artery are all pressure-sensitive. There are also vasomotor and hypersecretion symptoms in these areas.
4. *Femoral neuralgia:* See → neuralgia, femoral.
5. *Glossopharyngeal nerve:* See → glossopharyngeal neuralgia.
6. *Greater occipital neuragia:* See greater → (T) occipital nerve. If the neuralgias are the result of radicular compression caused by → osteochondrosis of the cervical spine, the latter has to be treated (→ joints and → cervical syndrome). See also → headache.
7. *Herpes zoster neuralgia:* Post-herpetic neuralgia is caused by the loss of the large peripheral (A-beta) fibers. Hence, the gate-control system (see Part I, Section A, Chapter 7) cannot produce the appropriate presynaptic inhibitory effect. The gate remains open and information can pass uncontrolled via the C fibers (which react particularly well to procaine). As soon as the flood of information exceeds a critical limit, pain is produced in the relevant neural zone. Anesthesia shuts this gate and restores equilibrium. See also → herpes zoster.
8. *Ilio-inguinal nerve:* See → ilio-inguinal syndrome.
9. *Intercostal nerve:* See → intercostal neuralgia.

10. *Intermedius neuralgia* (Hunt neuralgia, neuralgia of the geniculate ganglion of the facial nerve): The intermedius nerve is a branch of the facial nerve and has both sensory and secretory fibers. The symptoms of this form of neuralgia are spasmodic or continuous pain in the region of the ear, the external auditory canal, and part of the external ear. Occasionally there is increased lacrimation and salivation accompanied by taste sensations. Injections are given to the → (T) mastoid process, into the facial canal, and to the → (T) stellate ganglion.
11. *Lateral cutaneous femoral neuralgia:* See → meralgia.
12. *Mandibular-joint neuralgia:* See → neuralgia of the temporomandibular joint.
13. *Nasociliary neuralgia* (Charlin syndrome, ciliary neuralgia): Spasmodic pain in the region of the bridge of the nose, spontaneous pain and tenderness of the eyeball, lacrimation, conjunctivitis and scleritis, sometimes accompanied by corneal herpes or keratitis. During an attack, the forehead is often flushed. Typically, the patient states that he or she would like to tear out his or her eyes.

    Treatment: injections into the angle formed between orbital arch and nose, into the → (T) supraorbital nerve, the middle of the bridge of the nose (where bone and cartilage meet), and to the → (T) ciliary ganglion. Repeated use of a → (T) nasal spray can stop or at least relieve an attack.
14. *Obturator neuralgia:* Obturator neuralgia causes pain and sensory disturbances on the inner aspect of the thigh and can therefore be easily mistaken for a disorder of the knee joint. The adductors and adductor reflexes are weakened.

    Causes: obturator hernia, neoplasms, fracture hematoma.

    Treatment: if surgery is not envisaged, procaine should be injected to the → (T) obturator nerve.
15. *Pterygopalatine ganglion:* See → pterygopalatine ganglion, neuralgia of (Sluder neuralgia).
16. *Pudendal neuralgia:* This type of neuralgia is relatively frequent and can easily be mistaken for an irritable → bladder, an autonomic → gynecological dysfunction or neuritis of the pelvic floor. If the diagnosis is wrong, this condition is then improperly and inadequately treated with analgesics and sedatives (→ (T) pudendal nerve).
17. *Sciatic neuralgia:* See → sciatica, → (T) sciatica.
18. *Superior laryngeal neuralgia:* Pain and tenderness in the region of the larynx and the lateral portions of the neck.

Treatment → (T) quaddles over the hyperalgetic areas and injections to the → (T) superior laryngeal nerve.

1. *Supraorbital neuralgia:* See → (T) supraorbital nerve. The irritation of the carotid plexus underlying this condition is treated by injections under the → (T) scalp, to the → (T) mastoid process, the → (T) supraorbital nerve, the → (T) maxillary tuberosity and the → (T) ciliary ganglion. The treatment may also include anesthesia of the → (T) stellate ganglion and injections to the → (T) carotid artery.
2. *Trigeminal neuralgia:* See → trigeminal neuralgia.
3. *Tympanic plexus:* Deep-seated and superficial pains in the region of the auditory canal, with trigger points in front of the ear and in the external auditory canal.

    Treatment: → (T) quaddles over and injections into the trigger points, also to the → (T) mastoid process and the → (T) stellate ganglion.

Neuralgia, femoral Reduced patellar tendon reflex, paresis of the femoral quadriceps muscle, loss of sensation in the front of the thigh and the inside of the leg.

Causes Pressure paresis following surgery of the pelvis or hip, sequel of hematoma, or a lymph node in the groin.

Treatment Injections into the → (T) femoral nerve. If this is ineffective, the patient should be referred to a neurosurgeon.

Neuralgia, glossopharyngeal → glossopharyngeal neuralgia.

Neuralgia, intercostal → intercostal neuralgia.

Neuralgia, lumbosacral → lumbosacral neuralgia.

Neuralgia of the temporomandibular joint This is a form of neuralgia without trigger points. It is caused by excessive stress on the temporomandibular joint due to faulty dentition or inadequate support resulting from the loss of teeth. The neuromuscular balance is disturbed. This causes spasm in the masseter muscles and produces pain that can be mistaken for → trigeminal neuralgia or → cervical syndrome. When pressure is applied from the mouth on the lateral pterygoid muscle behind the maxillary tuberosity, severe pain is produced that can radiate to the ear. In these cases, close cooperation with a dentist is essential. For temporary relief, a local anesthetic is injected into the temporomandibular → (T) joint, from the mouth into the masseter muscle, and into the lateral pterygoid muscle.

Neurasthenia "Neurasthenia is the inability of the autonomic system to generate or maintain the elec-

trical voltages that are physiologically necessary" (F. Huneke). Neurasthenia is a nervous exhaustion with pathological irritability of psychological functions. The success of neural therapy is unlikely if there is a constitutional predisposition. The use of neural therapy is useful if neurasthenia is a general reaction to various internal stimulations (including latent hyperthyroidism, early stage cerebral sclerosis, results of craniocerebral trauma) or external stimulations (for example, stress at work or in a relationship). See also → neurovegetative dystonia, → headache, → thyroid, → insomnia.

Neuritis The aim must be to produce a reversal in the state of the neurovegetative system, since this disorder is always the result of a general disturbance. In polyneuritis always look first for an interference field. See → neurological disorders, → (T) Ponndorf's vaccination.

Neuritis of the brachial plexus Injections are given into the brachial plexus, as described for the → (T) nerves (afferent). It is also possible to reach the cords of the brachial plexus by inserting the needle as for the injection to the → (T) stellate ganglion according to Leriche, and then moving the needle laterally until the patient indicates a sudden stab of pain and a twitching sensation radiating as far as the fingertips. After negative aspiration (no CSF or blood), 1 mL of procaine is injected to the root of the plexus. If the patient is not pain-free after repeating this treatment several times, search for the interference field. Chirotherapeutic methods are also indicated in this type of disorder.

Neuritis of the pelvic floor → pelvis; → gynecological dysfunction, autonomic; → (T) epidural anesthesia; → (T) pudendal nerve.

Neuritis, optic → eye disease.

Neurocirculatory disturbances There is a common origin for acrocyanosis, angiospasm, brachialgia, causalgia, intermittent claudication, obliterating endarteritis, neuritis following angiography, paresthesia, post-phlebitic pain, post-sciatic circulatory disorders, post-traumatic edema and osteoporosis (Sudeck syndrome), Raynaud disease, thromboangiitis and vascular spasm. They all result from dysregulation due to irritation of the sympathetic nervous system and could therefore be classified by the common denominator of "sympathetic reflex dystrophy." The cause of the increasing number of central and peripheral arterial circulatory disturbances need not by any means be sought only in vascular disorders. Modern life, with its flood of irritative stimuli and the increased mental tension to which the individual is subjected, which can easily reach a level where there is a permanent state of stress, may result in neurovegetative disturbances of the vascular regulatory system. Impulses are constantly forced upon the vasomotor control circuits, which go far beyond the normal stress capacity of their reflex systems. This is bound to lead to vasomotor disequilibrium with abnormal vasodilation and vasoconstriction, with a reduced blood supply and all its inevitable negative effects, both immediate and subsequent. When the blood supply is disturbed, a safety mechanism sensitive to the autonomic system produces pain as a reflex response. This in its turn acts as a pathological irritative stimulus, which then causes further vascular spasm.

Treatment The injection of procaine is able to break through this vicious circle of reflexes and can thus initiate the healing process. Injections to the channels leading to the higher autonomic centers, such as the → (T) ganglia or the → (T) sympathetic chain, can also eliminate (i.e., "switch off") excessive pathogenic reflexes and accelerate restitution. However, we do not "block" anything. On the contrary, our therapy clears the channels that were previously blocked to the spontaneous healing powers of the organism and by which they can then once again become effective.

In mild cases, → (T) quaddles over the affected area and injections to the → (T) afferent arteries and → (T) nerves, or → (T) epidural and/or → (T) presacral infiltrations are all that will be necessary. Any pressure-sensitivity at the points of attachment of ligaments, in the musculature and periosteum of the extremities must always be sought out and eliminated by pinpointed injections, in order to restore resistance to stress by improving the blood supply by increased mobility.

Functional and organic vascular disease can be caused by persistent or recurrent sciatica. For this reason, → sciatica, whatever its origin, must be treated early and thoroughly.

Neurocirculatory dystonia → neurovegetative dystonia.

Neurodermatitis (atopic eczema) → allergies, → skin.

Neurodystonia A large number of patients who come into a doctor's surgery suffer from the results of "neurodystonia," an "autonomic stress syndrome" or, to be completely up to date with our terminology, a "psychovegetative syndrome." These are not, however, genuine diagnoses but collective descriptions invented in sheer desperation to cover a multitude of ways in which disturbed biological regula-

tory functions react. Neurodystonia is an imbalance in the currents of the autonomic system, which has to some extent become an almost integral part of modern humankind. The individual who is balanced in mind and body is in a state of eutonia, which no environmental irritation can disturb for any length of time. He or she has become a rarity. In our day, human beings can no longer completely balance out the excess of irritative stimuli of every kind that incessantly inundate them from earliest childhood.

Countless environmental stresses, such as toxic irritants, conflict situations, overstrain, the struggle for survival, anxiety, the consequences of infection, noise, dangerous radiation, chemical pollution of the environment and of the inner person combine to produce irritability, fatigue, depression, loss of concentration and of memory, and lead to many other typical states of exhaustion for which there is no simple cure. The result manifests itself as headaches, migraine-like symptoms, disturbed sleep, vertigo, depression, disturbances in the peripheral blood supply (e.g., cold hands and feet), increased vasolability, allergic symptoms, sexual impotence, anxiety states, restlessness, tachycardia, a tendency to asthma, ulcers, and other syndromes. These are only rarely organic in origin. All too often they are regulatory disturbances due to some interference field or other, which allow the metabolic and other regulatory organic processes to deviate beyond their normal limits for the economic use of energy. The increased lability of various regulating systems, which originates in the interference field, can affect the respiratory, cardiac, circulatory, and metabolic functions, and involve the abdominal and sexual organs etc., thus producing "neurodystonia."

Strictly speaking, every illness is a form of neurodystonia, because every one of them is accompanied by a deviation of the effective values from the nominal (or required) values and by deviant voltages in the autonomic system. These processes have now been revealed by biocybernetics in a new and clearer light. Today, the therapeutic task is not, therefore, that of blocking autonomic regulation to an even greater extent by strong medication or by surgery, both of which simply allow even more interference fields to become established, but to unblock it by the elimination of pathogenic interference fields and thus allow it to return to normal.

The helplessness of modern medicine, when it is confronted by such a vari-colored clinical picture, is shown by the curious contradiction that it is precisely these patients, whose clinical investigations are negative, for whom a particularly large number of medicines is prescribed. Psychopharmaceuticals, sedatives, and hypnotics play an especially important part in their treatment; precisely the kind of preparation that we know can inhibit autonomic regulation or block it altogether. A truly grotesque vicious circle! Drug treatment of autonomic regulation disorders is generally costly, symptomatic, has side-effects, and offers little relief. Compliance of the patient does not do them any good in this case but helps the cost explosion in the health sector. Neural therapy is able to lower drug use and curb costs. The economic benefit of neural therapy, due to the minor financial and technical effort required, cannot be ignored. The affected industry does not ignore it!

Often, when we take down the case history of a neurodystonic patient, we find the causes of neurovegetative deviations to have been present since early in childhood. Frequently we find that the patient has suffered from concussion, chorea minor (Sydenham chorea), encephalitis, meningitis, or some other serious infectious disease such as hepatitis, chronic tonsillitis, scarlet fever, diphtheria; otitis media, vaginal discharge, or a defective bite, any of which are pointers to early interference-field stresses.

As elsewhere, so also in neurodystonia it is advisable to treat the disorder as early as possible by means of neural therapy, in order to restore the system to eutonia, before the illness can manifest itself as a dangerous organic condition. It is quite possible that only segmental treatment will be necessary to deal with the symptoms wherever they appear. By eliminating them, we may thus also eradicate related disturbances elsewhere in the segment. Often, the → (T) thyroid is a good place to start, especially in women whose history points to the → (T) pelvic region. A series of → (T) intravenous procaine injections may also be enough to change the autonomic reactive state. In chronic liver disorders, a series of injections to the abdominal → (T) sympathetic chain can often help.

According to Bachmann, there are two acupuncture points that are always treated whenever a patient presents with disturbed autonomic functions. These are CV15, under the tip of the xiphoid, and GV19, at the back of the head, in the depression formed by the lambda-sagittal suture (but do not inject here in pregnant women, since there is a risk of inducing abortion). CV6 ("sea of energy") may also be quaddled. This is two fingers' breadths below the umbilicus.

However, in most cases, the only treatment of the true cause consists in searching for and eliminating the interference field responsible. A thorough case history can substantially shorten the road. If there is central stress following encephalitis or meningitis, consideration should be given to

whether a → (T) cisternal procaine injection might not be indicated. See also → neurocirculatory disturbances.

Neurogenic wryneck → torticollis.

Neurological disorders (inflammatory and degenerative) Injections into the affected → (T) nerve or the → (T) nerve-exit points, to the → (T) sympathetic chain and the regional → (T) ganglia. Interference field?

Neuroma The nerve bundle consistently sends irritative stimuli. The abnormal stimulation of the sympathicus and the secretion of epinephrine and norepinephrine support an ever-increasing excitation. Using anesthesia, we have to interrupt and eliminate this process at its origin. Neuroma frequently form interference fields! See → amputation-stump pains, → phantom-limb pain, → post-traumatic osteoporosis. See also → (T) scars.

Neurotrophic ulcer → neurocirculatory disturbances.

Neurovegetative dystonia, neurovegetative dysregulation According to Hochrein this is a "control defect in the circulation system with excessive and, at a later stage, paradox responses to irritative stimuli." Such control defects can be caused by irritative stimuli of various kinds, e.g., toxins or interference fields, which lead to reversal in the neurovegetative system. If the organism receives a further irritative stimulus, this can act as a trigger factor by being added to the former and the sum of these stimuli can then produce the attack of neurovegetative dystonia. See also → neurodystonia.

Nipples, cracked, eczema of This disorder occurs mainly in nursing mothers. A few subcutaneous infiltrations can rapidly provide substantial relief. See also → mammary eczema.

Nodules, fibrositic → fibrositic nodules.

Noise, damage from Exposure to high noise levels damages hearing but also increases the sympathetic tone and the adrenalin and cholesterine levels, which leads to circulatory disturbances. Decreased blood flow to the brain lowers concentration and reaction time. At 80 decibels the ability to concentrate decreases about 50 %.

Therapy Procaine dilates the vessels and removes regulation disturbances due to excess stimuli. We administer it intravenously (→ (T) intravenous procaine injections), to the → (T) mastoid process, and under the scalp at the level of the temples, one to two fingers' breadth superior to the center of the zygomatic arch. In severe cases we also inject to the → (T) stellate ganglion.

Nose For treating the nasal zone and the paranasal sinuses, the following injections form part of our armory:

1. As basic treatment, there is once again the → (T) intravenous procaine injection with its polyvalent action.
2. The paranasal sinuses are not easily accessible. We try to influence this extremely richly innervated area by injections to the lower and middle → (T) nasal conchae (better yet) using → (T) nasal spray or inserting a cotton ball soaked with a mucosal anesthetic. In this area we are able to reach the terminal branches of the olfactory nerves, of the middle branches of the trigeminal nerve, and of the pterygopalatine nerves (→ (T) pterygopalatine ganglion).
3. Injections into the often pressure-sensitive → (T) nerve-exit points of the supra- and infraorbital nerves may also help. With these, we are sometimes able to induce a sudden, severe, cleansing catarrh. Injections to the exit points of the → (T) palatine nerves at the major palatine foramen can have the same results (see Figs. 3.**67** and 3.**24**, Part III). They also act on the base of the maxillary sinuses, which can be infected through diseased dental roots.
4. Injection to the → (T) maxillary tuberosity and → (T) nerve. Also see the section on the dental interference field in the section, Searching for the Interference Field, Chapter 2, Section C, Part I, for the points of the mucosa of importance for the treatment of sinusitis.
5. The possibilities that the use of the → (T) nasal spray and the simple insertion of a cotton ball soaked with a mucosal anesthetic makes available to us have not yet received the recognition due to them in practice.
6. The heaviest guns in our armory, which we should always keep for the end of our segmental treatment, are once again the regional → (T) ganglia, in this case especially, the pterygopalatine, the stellate, and the Gasserian (otic).
7. Injections to the periosteum of the root of the nose can render useful services in vasomotor rhinitis, chronic catarrh, and other chronic disorders of the nose. In acupuncture, the combination of this point with the two exit points left and right of the supraorbital nerves is known as the "magic triangle," because the simultaneous needling of these three points has a magic effect on the paranasal sinuses beneath them. The anterior ethmoid nerve, a branch of the ophthalmic

nerve, supplies the mucosa for a part of the paranasal sinuses. The exit point of its only cutaneous branch is between the bony and the cartilaginous parts of the bridge of the nose and is easily accessible there.

8. If all this fails, there must be a strong suspicion that the cause lies in an interference field.

Anosmia, dysosmia in the first few sessions following concussion or cerebral bruising, combine → (T) intravenous procaine injections with injections under the → (T) scalp in the region of the temporal and parietal bones, and to scars and injury sites on the head, plus all the various forms of treatment listed under (1) to (8) above.

Colds, nasopharyngitis If used early enough, a → (T) nasal spray may stop the attack.

Nasal furuncles Injections to the → (T) stellate ganglion may be life-saving. See also → furuncles, → erisypelas.

Nasociliary neuralgia → neuralgia.

Nosebleed Severe epistaxis can often be stopped by the injection of procaine into the → (T) epigastrium. An → (T) intravenous injection may also help. Tamponade of Kiesselbach's plexus.

Ozena (offensive nasal discharge) This probably results from circulatory disturbances due to neural causes. Obviously, a genuine cure can be expected only after a series of treatments at about weekly intervals, provided a state of completed cicatrization has not yet been reached. Simple → (T) intravenous procaine injections are enough in about 50% of these cases to produce excellent, even surprising results lasting well beyond the period of treatment. This would seem to confirm the assumption that procaine, via the autonomic nerves in the vascular walls, is capable of producing a reversant stimulus in the diencephalon by which the dystonia of the neurovegetative system is eliminated and normal circulation restored. A number of authors have reported that following injections to the → (T) stellate ganglion there is a reduction of scabs and of the offensive odor, better circulation in and moistening of the mucosa, a return of the sense of smell, the headaches disappear, and there is a subjective sense of well-being. By way of local supportive treatment, the patient should be advised to use a → (T) nasal spray once a day to spray the nasal mucosa with a 2% pantocaine solution or some other mucosal anesthetic. Treatment of the upper teeth is an essential prerequisite!

Paranasal sinuses, maxillary sinus, sinusitis Seventy-five percent of all disorders affecting the maxillary sinuses have their origin in the teeth! Dental root apices in the upper jaw can cause and maintain chronic inflammation at the base of the maxillary sinus. This can produce interference fields. Thorough dental restoration is mandatory. Even following thorough dental treatment an interference field may remain, which makes follow-up treatment necessary. Maxillary pain and frontal headache can originate in the cervical spine. Thus, it also needs to be examined. Part of this examination is the palpation of the paravertebral muscles and the muscle attachments of the posterior neck including careful percussion of the spinous processes. Hyperalgetic points have to be injected.

In pediatrics, terms such as sinobronchitis, sinocolitis, and sinocystitis are used, which indicates interference field links during childhood.

Vasomotor rhinitis, hay fever Neural therapy can be used with success to deal with an allergic (→ allergies) reaction of the nasal mucosa. → (T) Intravenous injections have an anti-allergic and reversant stimulant effect. The nose and eyes are most commonly affected. We can reach the relevant nerve fibers via the pterygopalatine or → (T) stellate ganglion and, to some extent, by means of → (T) quaddles over the root of the nose and injections down to the periosteum above the root of the nose at the level of the eyebrows and above the center of the zygomatic arch. Descomps recommended anesthesia of the upper cervical → (T) sympathetic ganglion in allergic manifestations. In looking for the interference field responsible, the tonsils should be regarded as prime suspects.

Nosebleed → nose.

Nucleus pulposus, hernia of → intervertebral disk, damage to.

Nystagmus The differential diagnosis of whether a patient is suffering from a centrally (i.e., cortically) or a peripherally caused nystagmus can be established by giving an → (T) intravenous Xylocaine (lidocaine) injection of 1–1.5 mg/kg body weight, administered within 1 minute. Following the injection, nystagmus due to central causes will disappear for 15–25 minutes or there will, at least, be a substantial improvement, whilst the peripheral type will not be affected.

O

Obesity

1. *Adipositas dolorosa (Dercum disease):* Pain removal through → (T) quaddles and local subcutaneous injections. Search for interference fields.
2. *Following childbirth:* Injections into the → (T) pelvic region or to → (T) Frankenhauser's ganglia, possibly in conjunction with injections into the → (T) thyroid.
3. *Of diencephalous and/or pituitary etiology:* Repeated injections of 1 mL intravenously (→ (T) intravenous procaine injections), 0.5 mL under the → (T) scalp. If not sufficiently effective, inject to the → (T) stellate ganglion or the adenoids (→ (T) pharyngeal tonsil).

Obliterating endarteritis → neurocirculatory disturbances.

Obstetrics We can find it in print that the relative numbers of cesarean sections in Germany are double of that in, for example, Great Britain. This raises the question about the extent of obstetric intervention. It is a mistake to view childbirth generally as a risk to health and treat it like a disease that needs to be removed quickly and under optimal circumstances, i.e., in the clinic only. Worse yet is the credo that everything that could be done has to be done. Luckily, this philosophy has been abandoned again. Most hospitals have returned to a more natural approach to childbirth. Our responsibility is to protect mother and child from any risks and support the mother in the delivery process as far as that is necessary and safe.

Birth is a natural process in which the body's autonomic regulation initiates proper and useful measures by itself. Medical intervention has to be well indicated and needs to be cautious and simple, otherwise it disturbs the natural process. Only a few drugs that cannot do harm should be administered if necessary. Medical intervention that is not mandatory for the mother and child's well-being should not take place: "Do no harm, nor act without indication!"

Therapy The following procedures are available to neural therapy:

1. → (T) Intravenous injection of no more than 1 (or 2) mL of 1 % procaine solution that can be repeated every half-hour if necessary. It intensifies labor and the effects of oxytocics, because procaine sensitizes the uterus for the posterior pituitary hormones. Acting as a beta blocker, it raises the threshold for stressors. Also, it acts as a central analgetic, spasmolytic, circulatory regulator, vasodilator, and balances the autonomic system. All of this supports the physiological delivery process.
2. → (T) Quaddles over the sacrum and the lower abdomen use the cutaneovisceral reflex zones from T10 through L3 and S2. During the period of dilatation, pain impulses are transmitted via T10 to L1, during the expulsion period they are transmitted via T10 to L5. Labor can only begin once the uterus is ready for labor. The same quaddles can also relax the uterus during excessively violent contractions, because they normalize uterine function in this case as well. Irrmann used measuring instruments to demonstrate that quaddles set on the skin above the corresponding Head's zones decrease the period of dilatation considerably.
3. The vicious circle formed by anxiety—tension—pain—more anxiety etc., has a disturbing, complicating, and decelerating effect on the delivery process. We break it up during the state of anxiety if we give injections of 0.5–1 mL 1 % procaine (instead of anxiolytics) in both → (T) thyroid lobes. When applied correctly, they do no harm. Initially, they act psychoprophylactically; later they calm psychosomatic overexcitability. These injections can also be given every half-hour.
4. According to Vishnevski, an injection into the lumbar → (T) sympathetic chain will result in the rapid, active aperture even of a rigid cervix within a matter of 2–3 hours and in the more rapid expulsion of the fetus, by acting directly on the innervation mechanisms of the uterus and, consequently, on its motor functions.
5. Alleviating the pain of the mother cannot take place at the expense of drug damage to liver, brain, and heart of the newborn. This is true for all neural-therapeutic applications in the form of → (T) peridural or paracervical "blockers" (→ (T) Frankenhauser's plexus) and anesthesia of the → (T) pudendal nerve (S2 through S4) during the expulsion period, which ameliorate or eliminate

the rotation pain of the pelvic floor, the vagina, or vulva. It also applies to local anesthesia before episiotomy. Without concern, anesthesiologists and obstetricians use the common local anesthetics (lidocaine, mepivacaine, bupivacaine). They do not realize that, in this case, procaine works much better and is safer. When using 1 % procaine, these injections are safe for mother and child!

Usubiaga did not detect any effect on the mother or the child, nor traces of procaine in the child's blood with a procaine dose of 4 mg/kg body weight (that equals approximately 25 mL of the 1 % solution). According to Gibbs, 5–10 % of fetal bradycardia following the administration of lidocaine sub partu is the result of uterine vasoconstriction. Procaine, on the other hand, has a vasodilating effect. After 1 minute, lidocaine can be detected in the mother's bloodstream, 2 minutes later in the fetal bloodstream. Maximum concentration is reached within 10 minutes in both mother and child. At this point, the child can experience convulsions, bradycardia, and central-nervous depression with fatal results. In the mother, lidocaine is rapidly reduced in the liver. In the child, it takes up to 45 minutes (Philipson). Ophalotomy should take place only when the umbilical cord is not pulsating any longer and most of the lidocaine is returned to the mother. It has been shown that the venous blood of the umbilical cord after delivery contained a higher concentration of the local anesthetic and its amide structures than the mother's blood! In the child, traces of lidocaine and its metabolites can still be detected 2 days after delivery. The newborn's liver has to metabolize the substance. The mother owes a delivery with little pain to the obstetrician. The child pays with toxic strain!

6. *Perineal protection:* As soon as the infant's head becomes visible, we infiltrate a total of 5 mL–10 mL of procaine into the perineum and the two lower halves of the labia. Still better is an injection into the → (T) pudendal nerve. By eliminating perineal pain, the patient in labor is easier to control. The anesthetized and relaxed perineum is less rigid, so that perineal tears and episiotomy can generally be avoided when this form of prophylaxis is used. If one wants to make doubly sure, hyaluronidase (kinetin) can be added to the local anesthetic. This additive ensures a more rapid diffusion of the local anesthetic through the tissues. In this event, however, the fact must be taken into account that the toxicity of the local anesthetic is increased by accelerated resorption and the dose should be reduced accordingly.

The (exaggerated) fear of procaine allergies is not an obstacle to our request to use only safe 1 % procaine for neural therapy and local anesthetics in pregnancies and obstetrics. Intolerances can be quickly and easily detected through conjunctival and intracutaneous tests. See also → abortion, → eclampsia, → pregnancy, disorders of.

Obstruction, intestinal → intestinal atony.

Obturator nerve, neuralgia of → neuralgia.

Occipital neuralgia → neuralgia.

Occlusion, intestinal → intestinal atony.

Oedema → edema.

Oesophageal stenosis → esophageal stenosis.

Olfaction, impairment of → anosmia.

Oligomenorrhea → polymenorrhea.

Ophthalmia, sympathetic → eye disease.

Optic neuritis → eye disease.

Oral mucosa, diseases of Paint with 2 % pantocaine solution, infiltrate procaine submucously to the → (T) palatine and/or lingual nerves and, in particularly severe cases, inject to the pterygopalatine or → (T) stellate ganglion. Also see under → (T) teeth.

Orchitis → testes, → mumps.

Orthostatic dystonia This circulatory dysregulation is a symptom of autonomic disequilibrium, for which a "vasoneurotic constitution" is often blamed. However, it need not be irreversible. → (T) Intravenous injections once weekly can bring about the reversal effect, unless an interference field (tonsils?) is the culprit.

Osgood-Schlatter disease → osteonecrosis, aseptic.

Ossifying myositis → myositis, ossifying.

Osteitis of the pubic bone → pubic bone, osteitis of the.

Osteoarthropathy, hypertrophic pulmonary (Maria Bamberger syndrome) This is a rare disease in which a symmetrical osteitis occurs because of a benign or malignant lung tumor. It is generally localized to the phalanges and terminal epiphyses of

the long bones of the forearms and legs. The pain radiates into the joints. All pain in limbs and joints disappears immediately following anesthesia of the vagus nerve (see → (T) glossopharyngeal and vagus nerves) or the superior → (T) cervical ganglion.

Osteochondrosis The spinal column is familiar to us as a potential interference field and we also talk of vertebragenous disorders. A purely mechanical view of a constriction of the intervertebral foramina by arthrotic spicules or a prolapsed → intervertebral disk causing pressure on the spinal nerve roots is correct in only some of these cases. Why are degenerative changes of the vertebrae and intervertebral disks taken for granted as prerequisite for this condition? Can they not also result from an irritation of the sympathetic chain, which may be produced in the region of the head and neck or even due to an interference field at some remote site in the body? If so, the constriction of the → (T) afferent arteries, which can have such a many-sided and devastating effect on the ear, the neck, and throughout the shoulder-arm region, will be produced not so much by mechanical as by neurovegetative causes. Pain, nerve irritation, circulatory disturbances, degenerative changes, pressure on nerves, vascular constriction, resulting in further pain, finally turn into an ever more destructive sequence in a vicious circle.

Our therapy can restore the nerve and blood supply to normal, to the extent that this is anatomically still possible. If we fail to break through this vicious circle within the affected segment, by anesthesia localized at the site of the pain (→ cervical syndrome), we need to eliminate the interference field that controls it, in order to get rid of the remote-controlled irritation that has prevented the body from responding to all local efforts. See also → kissing spine syndrome, → joints, → tendovaginitis.

Osteochondrosis of the vertebrae → Scheuermann disease.

Osteomyelitis Huneke observed his first lightning reaction when he treated an osteomyelitis scar. Acute and chronic inflammatory conditions are treated with → (T) quaddles set around the site of the inflammation and, in addition, by injections in depth down to the periosteum of the affected bone. This treatment may also be accompanied by injections to the → (T) afferent arteries and → (T) nerves. Procaine attacks the inflammation at its roots, whilst antibiotics merely deal with the pathogenic agent. In severe cases, the best treatment is provided by a combination of both.

Osteonecrosis, aseptic This may occur, for example, in the navicular or lunate bones, in Scheuermann or Osgood-Schlatter disease etc. → (T) Quaddles should be set once or twice weekly over the diseased area and its vicinity. In addition, procaine should be injected in depth down to the periosteum of the diseased bone and into its corresponding → (T) joint, possibly accompanied by injections to the → (T) afferent arteries and → (T) nerves. The most powerful weapon for this type of case is an injection to the appropriate portion of the → (T) sympathetic chain and possibly the relevant → (T) ganglia. If this fails, look for interference fields, for example, tonsil test.

Osteoporosis Disturbances of the liver/pancreas and intestinal mycosis can cause demineralization, because the necessary building blocks are not being resorbed in sufficient quantities.

Treatment Injections once weekly to the abdominal → (T) celiac ganglion, alternately left and right. The bone pain experienced in post-traumatic osteoporosis is the result of dystrophic reflexes, which should be treated with → (T) intra-arterial injections and injections to the relevant → (T) sympathetic chain and → (T) ganglia. See also → neurocirculatory disturbances, → post-traumatic osteoporosis.

Otitis media, otitis externa → ears.

Otitis, scarlet-fever → scarlet-fever otitis.

Otosclerosis → ears.

Oxygen deficiency → anoxemia.

Ozena → nose.

P

Palate See → (T) glossopharyngeal and palatine nerves.

Palsy, shaking → Parkinson disease.

Panaritium → paronychia.

Pancreatitis → abdomen, → pancreatic disorders.

Panophthalmia → eye disease. In a case of panophthalmia following the enucleation of an eye because of glaucoma, I was able to save the remaining eye by an injection into the enucleation → (T) scar.

Paradontal disease → periodontosis.

Paralysis Segmental treatment will depend on the site and cause. In spastic paresis of the legs, there is some improvement in the ability to walk, when 1 mL procaine is injected into the patellar and possibly also the Achilles tendon of each leg. See also → multiple sclerosis, → stroke. The fact that even paralysis may be due to an interference field is demonstrated by Case History 9 in Part I p. 104, of the veterinary surgeon Dr. S., whose 2-year old absolutely organic "paroxysmal hereditary paralysis" disappeared instantly via the Huneke phenomenon.

Paralysis agitans → Parkinson disease.

Paralysis, facial Paralysis of the facial nerve (VIII) results when either (1) the peripheral nerve or (2) the area of its nucleus in the region of the pons is affected:

1. In peripheral facial paralysis, there is a functional loss of the facial muscles that are supplied by the nerve. Closing the eyelids and wrinkling the forehead is not possible, the corner of the mouth and the lower eyelid droop on the affected side. Viral infections or the effects of cold temperature are considered the cause.
2. In central facial paresis, the patient can generally still close his or her eyelids and wrinkle his or her forehead with little or no evidence of dysfunction! This form of facial paralysis always requires neurological examination. The dysfunction is always located on the side opposite to its appearance, in the cortex or between the cortex and the nucleus (bleeding, trauma, tumor, inflammation, colliquation, etc.).

The possible pathogenic effect of interference fields is excluded from consideration. We know that the chill that precedes acute paralysis can easily be the trigger factor that acts on tissues previously damaged by an interference field. This is why paresis can occur even when there is no infection present. In its frequently encountered form as "rheumatic" facial paresis following chilling, it is etiologically an edema producing spasm of the nerve vessels and ischemia in the mastoid section of the nerve. The facial nerve passes through a 30 mm-long narrow canal in the petrous bone before leaving it by the stylomastoid foramen, which lies in the angle between the styloid process and the mass of the mastoid process.

Treatment In fresh cases, a series of five to 15 injections should be given intravenously (→ (T) intravenous procaine injections) on the affected side and to the stellate or superior → (T) cervical ganglion, preferably within the first week. In addition, a site 10 mm medially and cranially from the tip of the → (T) mastoid process (i.e., the stylomastoid foramen) should also be injected. This should be supplemented by fanwise infiltration of the area of the facial nerve from the point of entry of the needle in front of the attachment of the earlobe. The treatment should be repeated every 2–3 days for 2–3 weeks until there is a distinct improvement. The stellate-ganglion injections can still improve circulation and restore nerve function by accelerating resorption of the edema as much as a year later, provided this is anatomically still possible. In cases due to an interference field, teeth and paranasal sinuses are prime suspects.

If there is no improvement after treatment, the patient should be referred to a neurologist, in order to ascertain that cerebral syphilis, polyneuritis, poliomyelitis, or a tumor is not the cause.

Because the causative dysfunction is located opposite to the paralysis, the left → (T) stellate ganglion has to be infiltrated if the right corner of the mouth is drooping and vice versa. Homolateral injections are useless.

Nikiforov treated 227 patients with facial paresis. During the first week, they received only stel-

late-ganglion injections. He was able to obtain 67 % cures, 20 % were distinctly improved, and only 13 % failed to respond. Interference fields were left out of account in this. The best results were achieved with patients who came for treatment within the first week of the illness. When treatment was begun later, and with older patients with pronounced arteriosclerosis or hypertension, the success rate was less good. Stellate-ganglion anesthesia proved superior to the standard forms of treatment with glucocorticoids, butazolidin, vitamins, sulfonamides, antihistamines, vasodilators, or electro- and physiotherapy.

Paralysis and paresthesia of the radial nerve → cervical syndrome, → osteochondrosis. Injections to the → (T) stellate ganglion, the brachial plexus, and the radial nerve (→ (T) nerves [afferent]).

Paralysis and paresthesia of the ulnar nerve Injection to the brachial plexus and directly to the → (T) ulnar nerve. See also → scalene syndrome.

Parametritis → pelvis, → backache.

Paranasal sinuses → nose.

Paraplegia, spastic F. Huneke reported on an advanced case in which it was possible to obtain a substantial improvement by a series of injections to the → (T) mastoid process. Even in apparently hopeless cases, a diligent search for the interference field responsible may be well rewarded.

Paresis → paralysis.

Paresthesia In circumscribed paresthesia, → (T) quaddles. See also → neurocirculatory disturbances, → paralysis, → sensory disorders.

Paresthesia of the radial nerve → paralysis and paresthesia of the radial nerve.

Paresthesia of the ulnar nerve → paralysis and paresthesia of the ulnar nerve.

Parkinson disease Parkinson disease (paralysis agitans) is characterized by a deficit of certain neurotransmitters (dopamine, norephedrine, serotonin). This deficit is caused by insufficient activity of the synthesizing enzymes. In this chronic degenerative disorder, neural-therapeutic measures are usually too late, since a fully cicatrized state with mature scar formation will normally have become established by the time a patient suffering from Parkinson disease comes to us. Improvement may be obtained by injections given intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp. It may also be worth trying injections to the → (T) stellate ganglion or, better yet, to the superior → (T) cervical ganglion.

Parodontosis → periodontosis.

Paronychia → (T) ring-block anesthesia with 2–4 mL procaine or lidocaine, if possible in the early stages before the formation of an abscess. Acute or chronic paronychia is caused by a fungus infection, generally *Candida albicans*. Humid working conditions and poor circulation favor the formation of paronychia in the nail fold. It generally does not heal readily and can continue with acute phases over several years. Neural therapy is an ideal choice for treating this condition. Apart from → (T) ring-block anesthesia and anesthesia of the → (T) median, radial, or ulnar nerves, 1–2 mL of procaine should be injected subcutaneously 10 mm proximally from the root of the fingernail. The preparation should then be distributed in the direction of the nail by finger pressure.

Parophresia → anosmia.

Parotitis epidemica, post-operative parotitis → epidemic parotitis, → mumps.

Paroxysmal neuralgia → trigeminal neuralgia.

Parturition → obstetrics.

Pelvic peritonitis → pelvis.

Pelvis Before attempting neural therapy, always exclude the possibility of gonorrhea, trichomonads, candida, chlamydia, tuberculosis, and malignancy! These conditions require exclusively (or additional) special therapy! Experienced neural therapists are unanimous in the view that in gynecological disorders recourse to surgery is taken far too quickly and too often. In our surgeries we only rarely encounter any woman patient over 40 who has not at least once in her life come into contact with the scalpel of one or other of our often all too knife-happy gynecologists. And when, time and again, we find how greatly our injections help in the majority of all functional and organic pelvic disorders in women, we must ask how much time will still have to pass before the last gynecologist has learned that neural therapy, with its harmless injections, has placed a "surgeon's bloodless knife" in his or her hands by which a large number of surgical operations in the pelvic region are made superfluous. The surgeon's knife should never be anything but a last resort after all conservative means have been tried.

Professor Goecke (Munster) estimated that 40% of all women suffer from pelvic disorders due to autonomic dysregulation. He obtained a success rate of 60–70% simply by treating his patients, the overwhelming majority of whom had previously received treatment by a wide variety of methods but without success, with the segmental therapy as taught by Huneke. Typl, in more than 1000 cases, obtained similar figures: 71% cures, 28% improvements, and only 1% failures. Only the failures were advised to undergo surgery. We are convinced that at least some of the failures could still have been cured without surgery via the Huneke phenomenon, following a thorough search for an interference field.

Pelvic disorders are often accompanied by → hormonal and → sexual disturbances. Objective proof of the stimulant effect of procaine upon the ovaries has been provided by Aslan and Marx. Vaginal smears proved that the production and secretion of follicle hormones increased and the vulvovaginal mucosa became healthier. It has been shown conclusively that procaine halts and reverses the involution symptoms of the sexual organs at the menopause.

Segmental Therapy in Pelvic Disorders

1. The nodal area for the zone innervated by the hypogastric plexus lies in the first to third lumbar segments of the spinal cord. We reach this by → (T) quaddles over the lower abdomen and the sacral region. Head's zones in the following segments may become hypersensitive: ovaries: T10, tubes: T11/T12, uterus: S3/S4.

   Many surgical operations of the lower abdomen are bound to fail because there has been no thorough examination of the abdominal walls and pressure-sensitive areas have been wrongly diagnosed as "adhesions" or "chronic adnexitis." When laparotomy is performed, the vascular delineation is more prominent, which is caused by regulatory disturbances, such as congestion. It is misinterpreted as inflammation, which leads to procedures that do not afford any or only temporary change in the condition. Future surgeries are preprogrammed and "inevitably lead to a corruption of genital function" (Goecke).

   Only searching palpation and by gently pinching the skin of the abdominal skin fold between well-oiled fingers or allowing the skin to roll through the fingers can lead us to these extremely significant hyperalgetic points and areas. Any scars present in these areas must of course also be treated. If the quaddles are correctly sited, we are able to act from the periphery via cutaneovisceral reflex channels to restore the affected organ to normality. Often enough this simple measure is all that is required. The needle is inserted through the quaddle and is advanced a little at a time to probe for the point of maximum pain. This may be subcutaneous, intramuscular, intrafascial, subfascial, or preperitoneal. When it is located, a small amount of procaine is infiltrated. It is important to observe the patient's facial expression closely and to use the free hand to fix their pelvis firmly, in order to intercept any sudden defensive move that an apprehensive patient may make. Injections into blood vessels in this region are harmless, and there is thus no need to aspirate first. There may be an occasional hematoma, but this is harmless and has the added beneficial effect of → (T) autohemotherapy. Even a superficial intraperitoneal injection could be given without hesitation, but this would be ineffective because it would not encounter any irritation-conducting system.

   At first sight, the preliminary examination of the patient to locate the hyperalgetic points in every layer within the segment would seem to be unduly time-consuming. However, it always helps to keep down the number of treatments required and to shorten the patient's period of suffering. Seen in this light, therefore, it saves time!

   We should search out any pain spots on the periosteum of the lumbar vertebrae, on the sacrum and coccyx, and on the symphysis. A small quantity of procaine should be injected to any that are found.

   If injections into these pain spots do not suffice by themselves, we have to extend the treatment by the following injections about once weekly (or whenever the symptoms recur):

   a. → (T) preperitoneal infiltrations and injections into the → (T) pelvic region; or
   b. into → (T) Frankenhauser's ganglia.

2. → (T) Intramural injection into the uterus for symptoms produced by radiation therapy or due to cervical stumps and lacerations, cesarian section, conization, placenta accreta, dilatation and curettage, and similar surgery of the uterus, and following endometritis and myometritis.

   With this segmental therapy we shall in the majority of cases be able to cure any non-specific vaginal discharge, → dysmenorrhea, all → functional disorders in the genital region, every kind of inflammatory condition of the lower abdomen, menorrhagia, and other menstrual abnormalities, or at least to produce an adequate improvement. To do so we can to a large extent dispense with hormones, since hormonal control is also subject to the supervisory functions of the autonomic system. It should be understood that carcinomas, polyps, submucosal myoma, etc. have to be excluded as the cause for abnormal bleeding.

3. In women, the upper part of the labiae are supplied by the genitofemoral and ilio-inguinal (→ ilio-ingui-

nal syndrome) nerves. The clitoris, urethra, the posterior part of the vaginal opening, perineum, and anal area are supplied by the → (T) pudendal nerve and branches of the lateral cutaneous → (T) femoral nerve. The posterior anal region is also supplied by branches of the → (T) coccygeal plexus (→ coccygodynia). In some cases we shall also have recourse to → (T) epidural or → (T) presacral infiltrations, or to a → (T) paravertebral injection in the lower lumbar segments.

4. The nasal reflex zones correlating with the urogenital area at the anterior third of the inferior → (T) nasal conchae are best reached with a cotton ball or swab that is soaked with a mucosal anesthetic.
5. From acupuncture we have learned with regard to disorders involving the abdominal and pelvic organs, especially when there is also congestion in the legs, to set → (T) quaddles on the inside of the thigh about the mid-point of the dorsal edge of the sartorius muscle and to give → (T) intramuscular infiltrations through these at a depth of about 40–80 mm; also to quaddle the medial aspect of the leg over the posterior tibial artery together with injections around the → (T) artery itself, possibly with additional quaddles above the region of the medial malleoli. A nerve-point detector can help us to locate the correct reaction points in this.
6. In hormonal terms, thyroid and ovaries are closely related. In the light of this link, any thyroid disturbance can affect the genital region and cause anything ranging from hypermenorrhea to amenorrhea. See also → (T) thyroid.

Any physician who has acquired a complete command of segmental therapy, and who has also learned to deal with the 30% of disorders due to interference fields by eliminating them via the Huneke phenomenon, will no longer want to do without the potential that neural therapy makes available for dealing with gynecological disorders. An example: a young woman was suffering from such heavy vaginal discharge that she was using five sanitary pads a day. All attempts with the segmental injections listed above proved failures. Immediately after an injection to the tonsillar poles her vagina became so dry that a few days later she asked for an ointment to make intercourse possible. Her condition became normal within a short time.

If one learns to obtain the patient's history with attention to the details that matter for neural therapy, one often hears women tell that at school they regularly had acute tonsillitis every spring and autumn, which stopped with their first period, but that their periods have always been very painful, with a good deal of intermenstrual discharge. Often there is a history of complications during pregnancy and of difficult labor. One needs to draw one's therapeutic conclusions from such details.

Nor should we ever forget that the susceptible pelvic organs can easily become the site of interference fields for other pathological conditions. The same also applies to any pelvic scars following gynecological surgery, and to perineal, vaginal, and cervical scars. The uterus and its adnexae are particularly prone to becoming typical interference fields following surgery, inflammation, and childbirth. Intrauterine pessaries are foreign bodies and frequently help to cause infections and thence lead to the formation of an interference field. Yet all the test injections into the → (T) pelvic region, → (T) intramurally and into → (T) scars are extremely simple and so often help to cure serious disorders instantly.

Also refer to the following: → abortion, → amenorrhea, → anorgasmia, → dysmenorrhea, → eclampsia, → frigidity, → gynecological dysfunction, autonomic, → hormonal disturbances, → hyperemesis gravidarum, → hypersection from the cervix, → sexual arousal disorder, → kraurosis vulvae, → mastodynia, → mastopathy, → metropathia spastica, → obstetrics, → polymenorrhea, → pruritus, → sexual disturbances, → sterility, → symphysial pain, → vaginismus.

Pemphigus → skin.

Penis First exclude syphilis and gonorrhea. For furuncles, phlegmons, eczema, and the like, inject around the root of the penis as for → (T) ring-block anesthesia with about 2 mL of procaine, bearing in mind that the penis is innervated from the dorsum. Penis and glans are supplied by the → (T) pudendal nerve, the lateral and superior area by the genitofemoral and ilio-inguinal (→ ilio-inguinal syndrome) nerves. Injections to or into the → (T) prostate and → (T) presacral infiltrations can be also indicated. If this treatment does not produce the desired effect, inject to the → (T) pudendal nerve or try a → (T) presacral infiltration. The corresponding cutaneovisceral zone is situated at the upper end of the natal cleft.

Penile fibromatosis is a connective tissue proliferation that is poor in vessels and nuclei. It most frequently appears at the spongy bodies of the dorsum of the penis. During an erection the penis is painfully flexed. Hereditary disposition is assumed, because 10% of patients who suffer from this condition also suffer from Dupuytren's contracture. Trauma, vascular inflammation, metabolic disorders etc. are discussed as possible causes.

The positive results of neural therapy in the treatment of → Dupuytren's contracture, → keloid scars, hard → fibrositic nodules, and → prostate ad-

enoma encouraged me to try and correct this irregular connective tissue growth. This is done with injections into the excessive tissue, which softens and diminishes. The results are very gratifying and I can recommend the method.

Technique Only the approach described below is useful and bearable by the patient. We fixate the growth with the fingers of one hand and tighten the skin above it. With a swift move we insert a thin needle (0.4 × 20 mm) into the tumor. We infiltrate the tumor and, after retracting the cannula, the environment with 1–2 mL. That takes about 1 second. We place an additional depot at the root of the penis to affect the afferent vessels and nerves. Now, the patient disperses the injection fluid throughout the growth with a brief kneading massage. Initially, this treatment is repeated twice later once a week, and finally as needed. The patient can relate better to our approach at the site of the complaint than to other available treatment. However, a treatment series of 10 is usually necessary. This requires patience from the patient and the practitioner. In our opinion, the success stems from increased blood flow to the tissue after the procaine injection and from erasing sources of misinformation located in receptors that regulate connective tissue growth. Vitamin E prescription can be maintained as standard treatment (200–300 mg/day up to a total of 90 g).

Pension neurosis Experience shows that no therapy can succeed when the desire for a pension is greater than the wish to get better. In such cases psychotherapy must first eliminate the psychological interference field.

Peptic ulcer → abdomen.

Perforating ulcer of the foot → neurocirculatory disturbances, → tabes dorsalis.

Periarthritis of the humeroscapular joint → joints, disorders of.

Pericardial disease → heart.

Perineal tear, prophylactic measures against → obstetrics.

Perineum, laceration of → obstetrics.

Periodontosis Trophic gingival disturbances are not symptoms of an independent local condition but of a general neurovegetative disorder that often has a toxic (Till: mercury from amalgam fillings!) or endocrine genesis. Reduced capillary blood supply is accompanied by increased susceptibility to infection. If the cause cannot be determined, injections into the affected mucosa and to the underlying periosteum are worth trying (→ (T) teeth). The treatment should be at weekly intervals and must not be broken off too soon.

Periosteum Periosteal pain can be an indicator of disorders affecting the internal organs! In segmental therapy we therefore always include the bones in our palpation and inject to the hyperalgetic periosteum (see p. 222).

Periostoses are the result of tissue insufficiency in places where muscles are attached to the ends of bones or to bony ridges. Because of autonomic functional disturbances (and possibly also of constitutional factors), therapy-resistant and painful changes occur in the periosteum because of overstrain. Since in neural therapy success always depends on the correct siting of the injection, all hyperalgetic points on the periosteum and at the transition of the affected muscle to the ligament must first be accurately located by palpation. The needle is then inserted quickly immediately in front of the finger marking the hyperalgetic point and is advanced down to the bone, 1–3 mL of procaine solution is injected fanwise preperiosteally. If this does not suffice, I sometimes intentionally inject subperiosteally to the main hyperalgetic point.

Following injections into the periosteum, a painful reaction may occur and last a day or two, and the patient should be duly prepared for this. When this reaction has worn off, he or she will, as a rule, report a substantial improvement. If still required or if the pain has not gone completely, the treatment should be repeated about three more times at intervals of 2–3 days. About 50–100 units of hyaluronidase may be added to the solution before injection, in order to increase still further the diffusion capability of the procaine. This will, however, also accelerate resorption.

"Tennis elbow" can be caused through periosteal irritation of the radial head (→ joints) or of the lateral humeral epicondyle. Epicondylitis, ulnar styloiditis, and other results of overtaxing the upper extremities are often a consequence of → osteochondrosis of the cervical spine and are therefore an irritation of the cervical sympathetic chain. In such cases, injections to the → (T) stellate ganglion often give good results.

Peritoneal tuberculosis The successes achieved by laparotomy and laparoscopy can be explained by the reversant action produced by the operation following the neural stimulus of the peritoneal intervention. But the same effect can be achieved better

and more easily by injections to the abdominal → (T) celiac ganglion, into the → (T) epigastrium, or through → (T) preperitoneal infiltration. Moreover, these can be repeated weekly until the patient is completely cured.

Peritonitis The Russian scientist, Vishnevski, observed that patients who underwent laparotomy under a local anesthetic healed better and more quickly than those operated under a general anesthetic. This awakened his interest in "therapeutic anesthesia." To support normal therapy in such cases and to relieve pain we give repeated injections to the abdominal → (T) celiac ganglion and into the → (T) epigastrium, as well as → (T) preperitoneally. The antibiotics deal with the pathogenic agents, procaine and lidocaine combat the → inflammation.

Peritonitis, pelvic → pelvis.

Peroneal muscle, paresis of This occurs as a result of prolonged splinting of the leg or as "television paralysis," after sitting for lengthy periods with the legs crossed.

Treatment → (T) sciatic nerve and its branches.

Pertussis → whooping cough.

Phantom-limb pains Patients with phantom-limb pains are not psychotics but are seriously ill. Follow-up surgery is rarely successful. On the contrary, new interference impulses are likely to emanate from the effects of the operation. Metabolic and circulatory disturbances frequently occur in the inactive, atrophic stump. We have to eliminate these. We can often do so by injecting the scars in skin and bone, and the severed nerves and arteries. If this is inadequate, additional injections are given, depending on the amputation site, as follows:

1. *arm stumps:* injections to the → (T) stellate ganglion, the → (T) brachial plexus nerves, and intra- and periarterially to the → (T) subclavian artery;
2. *leg stumps:* injections to the lower → (T) sympathetic chain and/or the → (T) sciatic plexus, → (T) presacral → (T) epidural infiltration combined with injections into and to the → (T) femoral artery and → (T) nerve.

In acupuncture, the channels on *both* sides of the body are needled. D. Gross discovered that in amputation-stump pain, the disturbance can be treated from the contralateral (healthy) side with measurable and lasting effect. Thus, we search for corresponding hyperalgetic points on the contralateral side. Their lowered skin resistance can be measured. They primarily correspond on the contralateral side with locations where the patient indicates pain or trigger points of the stump or the amputated extremity. Frequently it is the injury site that caused the amputation. If this does not produce an improvement, find the interference field. See also → amputation-stump pains, → causalgia.

Pharyngitis sicca The unpleasant tickling and scratchy sensation in the throat can be quickly and easily eliminated by a submucous → (T) quaddle on each side medially of the pillars of the fauces on the level of the uvula. Swallowing can possibly still be painful but will disappear without further treatment after 1–2 days.

Phlebitis → thrombophlebitis, → varicose veins.

Phlebitis, retinal → eye disease.

Phlegmon In addition to antibiotics, set → (T) quaddles around the affected area, and combine with injections to the → (T) afferent arteries or, better still, the → (T) nerves (afferent). A still more effective treatment is to inject procaine to the → (T) sympathetic chain and its → (T) ganglia in the appropriate segment.

Photophobia → eye disease,→ (T) pterygopalatine ganglion.

Piles → hemorrhoids.

Pituitary disturbances → hormonal disturbances. If the pathogenic cause is inflammatory, try injections intravenously (→ (T) intravenous procaine injections) or under the → (T) scalp, possibly also to the → (T) stellate ganglion or into the nearby adenoids (→ (T) pharyngeal tonsil); or else find the interference field responsible.

Pleural shock → shock.

Pleurisy In dry and exudative pleurisy, we administer procaine intravenously (→ (T) intravenous procaine injections) on the affected side, → (T) quaddles over the painful area, and injections to the → (T) intercostal nerves, i.e., near the pleura. In severe cases, we may also have to resort to an injection to the → (T) stellate ganglion. This active method of treating the disorder, if repeated either singly or in combination once or twice a week, enables us, on the one hand, to obtain immediate freedom from pain and better depth of respiration and, on the other, to achieve rapid regression of the → inflammation and the exudate. As a matter of course, radiographic pic-

tures should be taken as a check after the pleurisy has resolved.

Plexus neuritis → neuritis of the brachial plexus, → sciatica.

Pneumoconiosis → lungs.

Pneumonia Apart from treatment with antibiotics, the treatment described in → pleurisy can rapidly relieve pain and prevent complications, even in elderly and frail patients. See also → lungs.

Poliomyelitis In the acute phase, procaine is repeatedly injected intravenously (→ (T) intravenous procaine injections) and a → (T) nasal spray is also used. Where the patient's life is at stake, treat by → (T) cisternal procaine therapy or → (T) CSF pump, followed by 1 mL given by lumbar puncture. When the acute stage is past, the dystrophic muscles (→ muscular dystrophy) are treated by → (T) intramuscular infiltrations and injections to the → (T) nerves (afferent), the → (T) sympathetic chain and its → (T) ganglia. In these cases it is only possible to improve the function of the damaged nerves, but not even neural therapy can reawaken dead muscles and nerves to life.

Polyarthritis → rheumatism.

Polymenorrhea Disturbances in the menstrual rhythm are normally due to centrally caused → hormonal disturbances.

Treatment Stimulate ovarian activity by injections into the → (T) pelvic region and → (T) quaddles over the related Head's zones. It is worth trying to influence the control organ, the pituitary body, by injections to the adenoids (→ (T) pharyngeal tonsil) and the pharyngeal hypophysis. In addition, always inject the → (T) thyroid, because of its control function. See also → pelvis.

Polyneuritis → neuritis, → neurocirculatory disturbances. Diabetic polyneuritis is the result of an inadequate blood supply of the nerve tissues and a disturbance of nerve metabolism. Interference field?

Polysclerosis → multiple sclerosis.

Polyuria, spasmodic → spasmodic polyuria.

Post-cholecystectomy syndrome → abdomen.

Post-sciatic circulatory disturbances → neurocirculatory disturbances, → sciatica, lumbar → (T) sympathetic chain.

Post-operative pain Treatment with procaine injected into fresh wounds is without risk, accelerates the healing process, and not only provides pain relief locally but also eliminates remote disturbances such as headache, nausea, anxiety etc., and enables the patient to draw deep breath without pain. This in turn prevents pneumonia and thrombophlebitis. Here, as in many other cases, the healing effect persists far longer than the purely pharmacological anesthetic action. Repeat the injection as often as necessary. This also prevents the scar from developing into an interference field.

Whenever the operation has been technically competent and injections into the → (T) scar or the corresponding segment do not help, we have to look for an interference field. Every operation can act as a trigger factor. See also → adhesions, → surgical sequelae.

Post-operative vomiting → vomiting, post-operative.

Post-traumatic osteoporosis (Sudeck atrophy) In a pathophysiological situation, the sympathetic system can amplify pain. The excitability of the nociceptors is consistently increased through positive feedback arriving via efferent pathways. Another important factor in this context is misregulation that leads to irregular vascular responses including increased dilation with capillary permeability, or to ischemia and atrophy. As a primary result of nerve injuries, short circuits cause discharge of nerve impulses without apparent reason. Conditions that display such malfunctions of the sympathic system, called algodystrophy, include Sudeck atrophy, Raynaud disease, causalgia, and neuromas.

Acute osteodystrophy can occur as a result of trauma and inflammatory conditions (→ inflammation) and is due to disturbed nutrition in which the balance between anabolic and catabolic tissue metabolism is disturbed. In the final analysis, it is a → neurocirculatory disturbance. The best prophylaxis is the early elimination of pain by means of local anesthetics whenever there is a → fracture or other → injury. In addition to reducing the immobilizing reflex → muscle spasm, the other neural regulatory and circulatory disturbances that act as a trigger for post-traumatic osteoporosis are also eliminated. A further important prophylactic measure is an early start with exercises, for which our pain-relieving treatment provides ideal conditions. Obviously, any major fracture must be immobilized until bony consolidation is complete. Neural therapy with local anesthetics, if used correctly, accelerates → callus formation.

Treatment Our task is to make the state of sympathetic irritation produced by the trauma resolve. This re-

quires that we interrupt the circuit of positive feedbacks. We do so by anesthetizing the hyperalgetic points and the proper sympathetic nerves. This can take 10–15 treatments within 1 month. Medico-mechanical follow-up treatment should accordingly be very vigorous, always provided it does not cause the patient pain.

The acute inflammatory phase of post-traumatic osteoporosis persists for about 3–5 months and can be cured without difficulty. A cure becomes somewhat more problematic in the second, dystrophic phase, but is still possible. The third phase, terminal atrophy, which would require healing an established defect, can always be avoided by active movement made possible by the elimination of pain. In our treatment we shall obviously always direct our efforts first to the site of the lesion that has acted as the trigger for dystrophy. For this purpose we inject the anesthetic solution into the skin or periosteal scar and the adjacent tissue that has sustained primary damage. Nor should we forget the → (T) afferent arteries and nerves. For example, → (T) intra-arterial injections in and to the brachial or → (T) femoral artery can remove vascular spasms and dysregulations that lead to dystrophy. They also accelerate tissue renewal. The most powerful weapon in the armory is once again the injection into the → (T) stellate ganglion or, in the case of the lower extremities, the lumbar → (T) sympathetic chain.

At the Leipzig University Hospital, 131 patients suffering from post-traumatic osteoporosis of the upper extremities were treated by anesthesia of the → (T) stellate ganglion alone, averaging five treatments each. This resulted in 35 % cures, 53 % improvements, and only 12 % failures. Doubtless, this result, excellent though it is, could have been further improved by combining this treatment with other possible neural-therapeutic injections. Practical experience supplies the answer to the theoretical question that still gives rise to dispute, as to the significance to be attributed to the sympathetic system in the genesis and therapy of post-traumatic osteoporosis: anesthesia of the → (T) sympathetic chain is the best and most readily justifiable therapy for this deviation of neurovegetative control.

Case History 26: H. W., Aged 60

The following case demonstrates that rather advanced conditions can be treated successfully. In 1969, 60-year-old H. W. from Munich suffered a complicated fracture of her elbow joint during vacation in a foreign country. The two fractured parts were screwed together and the arm was put in a cast. When she arrived at my office, her arm had been in the cast for over 3 months! She complained about intense pain in the immobilized arm and the shoulder, which was almost completely stiff and suffered disuse atrophy. The fingers that protruded from the cast were cold, edematously swollen, and hurt with the slightest movement. She had already been diagnosed with post-traumatic osteoporosis, which was evidently correct. The professor had told the patient that she had to resign herself to the fact that her shoulder, arm, and hand will become completely stiff in this position. This was irreversible. "At least she would always carry her very own little tray in front of her!" What a dark sense of humor!

Therapy: After immediate removal of the cast and anesthesia of the stellate ganglion, all palpable sensitive points at the bones, tendon attachments, and muscles were infiltrated, all joints involved intra-articularly injected. Two bright red hyperesthetic scars superior to the elbow joint were also injected. The patient diligently followed an exercise regimen at home. After 15 treatments, she was able to move her joints without pathologic limitations. Only the elbow joint suffered an irreversible 20° extension loss. The blood flow to the arm was regular. There was a slight lack of strength upon making a fist. The condition has remained the same during 15 years of monitoring the patient. Even I did not expect such positive results.

Posterior spinal sclerosis → tabes dorsalis.

Post-vaccination complications → smallpox vaccination, complications after.

Potency, disturbance of → impotence, → sexual disturbances.

Pre-eclampsia → eclampsia.

Pre-operative preparation An → (T) intravenous procaine injection before surgery will reduce the quantities of narcotics and curare required and prevents cardiac irritation and rhythm disturbances (→ heart).

Pregnancy, disorders of Procaine treatment is not contraindicated in pregnancy! Acupuncture advises against injections in point GV19 (the notch at the back of the head, palpable at the intersection of lambdoid and sagittal suture) because needling of this point can induce abortion.

The treatment with 20–25 mL of a 1 % procaine solution is risk-free for mother and child. The mother's tissue breaks down the procaine quickly, before it passes the placental barrier (Usubiaga). Modern amide-type local anesthetics such as lidocaine (Xylocaine), mepivacaine (Scandicaine, Meaverin), and bupivacaine (Carbostesin) reach the circulatory system of the child. When given sub partu, they have to be disposed of by the mother's and the

child's liver (Gribbs, Philipson). Procaine dilates the uterine artery of pregnant women and the amide-type local anesthetics constrict it (Gribbs). See also → abortion, → eclampsia, → obstetrics, → hyperemesis, → neuralgias, → kidneys, → thyroid.

Priapism → impotence, → penis, → sexual disturbances.

Proctitis, Proctalgia fugax Spasm of the levator ani: → anal disorders.

Prolapsed intervertebral disk → intervertebral disk, damage to.

Prostate (and difficulties of micturition of unknown etiology)

1. Chronic prostatitis, especially in younger men, can be the result and a complication of a recurrent bacterial urogenital disorder, but it may also (and at any time) be the cause of it. Temporarily inactive bacteria can become active again due to exogenous and endogenous stresses weakening the body's defenses and may cause the condition to flare up again. Specific chemotherapy related to bacterial cultures can make sense and be successful only if the disturbances of micturition are accompanied by fever, rigors, leukocytosis and if the bacteria are found to be present in the urine and expressed prostatic secretion. Only in cases where the presence of bacteria and inflammations can be verified, is the term "prostatitis" justified. If mycoplasms and chlamydia are present, these must be treated at the same time by medication.
2. But in over two-thirds of all these cases we are in fact looking at an "autonomic urogenital syndrome" ("anogenital symptom complex") in which bacterial infection plays no part at all or has only a subordinate role and antibiotics are not indicated! When a primary bacterial infection has been (seemingly) cured by chemotherapeutics and antibiotics, can a non-bacterial prostatopathy of neural origin follow. This can also happen in a healthy prostate without true prostatitis! In these cases, neural therapy is especially suitable. Repeated procaine or lidocaine injections into the → (T) prostate improve the blood supply and tissue nutrition, they eliminate autonomic regulatory disturbances, and so modify the environment that it becomes inhospitable for the bacteria.

   As a general rule, it is a fact that any influences that disturb the neurovegetative equilibrium can also lead to prostatitis and hence to difficulties of micturition. Apart from injection treatment, it is particularly important in this type of disorder to deal with possible psychosocial conflicts. A long and detailed talk with the patient is advisable, in which he should be told that whilst his symptoms are unpleasant, they are not something to worry about, that our therapy stimulates the blood supply and mobilizes the body's self-healing powers. Here again the truism applies that the prostate can also act as an interference field for almost any chronic disorder, with only few exceptions.
3. Generally, adenoma (hypertrophy) of the prostate will also resolve after early treatment with a series of injections into the → (T) prostate. The corresponding skin segment in which we set → (T) quaddles lies over the coccyx and the cranial end of the natal cleft. → (T) Epidural or → (T) presacral infiltrations may also produce good results; also injections to the → (T) pudendal nerve and into the posterior → (T) sacral foramina.

   Heusterberg used these injections on 400 prostate patients and cured 92 % of those suffering from prostatitis and about 80 % of those presenting with prostatic hypertrophy, especially those whose gland was enlarged and soft to medium hard. In carcinomatous prostate, with its craggy surface found on palpation, no success is to be expected from neural therapy. Such cases and any others that fail to respond to neural therapy should be referred to the urologist.

Prurigo → pruritus.

Pruritus We need to make a distinction between neurogenic and psychogenic (essential) pruritus (→ psychogenic disorders). In the latter, we can expect no success. If the itching is localized, we give intra- and subcutaneous injections (→ (T) quaddles). In cases of anal and vulvar pruritus, → (T) quaddles are also set over the caudal sacrococcygeal area, about the upper end of the natal cleft, and intra- and subcutaneous infiltrations are administered in the itchy areas. These are painful but effective. Injections are also given to the → (T) pudendal nerve, into the posterior → (T) sacral foramina, or → (T) epidural or → (T) presacral infiltrations and injections into the → (T) pelvic region may help. In men, the → (T) prostate should be injected. Inject into the scarry prostate bed if the condition occurs after prostatectomy. Repeat the treatment if there is a recurrence. If the effect does not increase sufficiently, look for an interference field. In generalized pruritus, e.g., in → hepatitis, and in senile pruritus, a series of → (T) intravenous injections can work wonders. Should this not produce the desired effect,

give injections to the → (T) stellate ganglion. See also → kraurosis vulvae.

Pseudo-arthrosis, prophylaxis against → fractures, → callus formation.

Psoas syndrome If the psoas muscle is overstretched on one side as a result of reflex effects, of inflammatory disease in its vicinity, of rheumatic inflammation, or static changes, this will lead to backache that still persists when the patient is lying down, and to pain in the lower abdomen on the affected side or in the hip. These pains can radiate up the back and down as far as the lateral aspect of the thigh. In the back, characteristic hyperalgetic points and fibrositic nodules are found paravertebrally in the lumbar region from T12 through L5, since this muscle takes its origin at the lateral surfaces and processes of these vertebrae.

In order to make it easier to locate these hyperalgetic points, the patient first lies prone and stretches his or her leg by rotating it inwards and straight back and up. The patient then lies supine, to enable us to palpate the hard and tightly stretched psoas above the inguinal ligament when they raise their stretched leg. Finally, while they are still supine, we ask them to place their heel on the knee of the other leg and palpate to check whether the attachment of the psoas to the trochanter minor is pressure-sensitive and painful.

Therapy The tender spots found in these three tests are then sought out with the point of the needle and a local anesthetic injected. Often enough, all that is needed will be to infiltrate 3–5 mL into the ligamentous attachment of the psoas to the trochanter minor on the inner aspect of the thigh, three fingers' breadths below the groin. If the spinous processes are sensitive to palpation (for example, T12 or L1) we inject the spinous processes and the corresponding → vertebral joints or → (T) preperiosteally to the vertebral body. → (T) Presacral or → (T) epidural infiltrations, an injection to the → (T) trochanter major or through the lowest of the → (T) sacral foramina to the inner face of the sacrum may also help. If the condition lasts over a longer period of time, the sacroiliac joint may be involved due to unilateral compensation. In stubborn cases, the trigger cause may be irritation at L2 (→ (T) sciatic nerve).

Psoriasis Insulin stress tests and success with adrenal cortex hormones seem to prove that the neurohormonal system also plays an important part in psoriasis. Psoriasis is related to eczema, but in this case the reactive state of the → skin is not identical. Together with the reversant effect of → (T) intravenous injections, local subcutaneous infiltrations to the worst affected areas may produce the required improvement. In addition, in the light of the effect on liver and adrenals, we always inject also to the abdominal → (T) celiac ganglion. The treatment is repeated at about weekly intervals. Six to eight treatments may be necessary before there is any noticeable improvement. Here as elsewhere, in case of failure, find the interference field. So, for example, I was able to cure a patient with generalized psoriasis in a very short time by injecting procaine three times into a scar on the right eyebrow. However, the fact should also be stated that this success is counterbalanced by a number of total failures. In a third of psoriatics, acute exacerbation could be related to tonsillar provocation.

Psychogenic disorders If any patient complains loudly, and no objectively recognizable changes can be found, or if any changes that are found are only minor in character, it is often easy enough to suspect that he or she is suffering from a disproportionately strong psychological reaction. Since objective proof of autonomic disturbances is difficult to obtain, such conditions are often misinterpreted as exaggeration, pretence, or latent depression. Any snap judgment in such cases is inadvisable, and an attempt should always be made to seek the cause.

Genuine psychogenic disorders cannot be cured by neural therapy, since it does not rely on suggestion for its effect, at least no more than is probably present in any other medical intervention. An attempt is always justified in doubtful cases, since any disorder can suggest a psychogenic origin at first sight and is often found to be due to an interference field. If there is a psychological overlay, the apparently psychogenic accompanying symptoms generally disappear at once when their root cause is eliminated by segmental therapy or via the Huneke phenomenon. Professor Harrer in Salzburg reported an interesting case as recounted in the following case history.

Case History 27: Patient with Cervical Syndrome, Aged 48

A 48-year-old woman patient presented with a cervical syndrome with severe root pain, especially in the region C5 through C7 right, and with pronounced attendant autonomic symptoms. Neurological findings: slight flexion pain in the neck, foraminal compression pain probably positive, severe spasm and increased pressure sensitivity in the right neck and shoulder-girdle musculature. Severe Horner syndrome due to irritation on the right, right biceps tendon reflex slightly stronger. Sensation: pronounced "dissociated hypoesthesia" (Janzen) in the region of the right upper quadrant. Absent vibra-

tion sense over the basal joint of the right thumb. X-rays: extension of cervical spine, osteochondrosis in C5 through C7, deformation of the vertebrae and vertebral joints and of the intervertebral connections. Under emotional stress, there was always a reproducible exacerbation of pain, because of which in all earlier examinations the patient had been described as "severely hysterical."

We now succeeded in proving by means of electrodermatographs that following emotional stimuli severe autonomic (sympathicotonous) irritation symptoms occurred in the affected area, which went hand in hand with the exacerbation of pain. This is not particularly surprising in view of the close relationship between pain and the neurovegetative system. We were thus able to obtain impressive objective evidence of the autonomic symptoms of irritation following stimulation and record these by means of graphs. In a sense, therefore, these also documented the "pain" in the affected area at the site of maximum irritation. In this way, in a large number of graphs of this kind, it also became possible to show the damping effect of Hydergine treatment, but in particular—and this is of particular relevance here—the completely normalizing action of an Impletol injection to a tooth that acted as the interference field. Emotional stimuli now remained without any effect, both electrodermographically and clinically. We believe that in this case we succeeded in providing objective evidence, in the form of graphs, of the lightning reaction that we observed clinically.

Psychoses Procaine has no effect on mental illness. Exceptions: certain forms of → depression and → schizophrenia. There have been reports that the → (T) CSF pump has helped in post-traumatic psychoses.

Psychovegetative syndrome → neurodystonia, → thyroid.

Pterygopalatine ganglion → Sphenopalatine (pterygopalatine) ganglion, neuralgia of.

Pubic bone, osteitis of This can occur, for example, following retropubic prostatectomy.

Treatment → (T) quaddles over the area of the pubic bone and infiltration down to the periosteum, or → (T) epidural or → (T) presacral infiltrations, or injection into the region of the → (T) prostate.

Pudendal nerve → neuralgia.

Pulled muscles → injuries, → sprains.

Pulmonary disorders, embolism, hemorrhage, osteoarthropathy (hypertrophic), tuberculosis, tumors → lungs.

Pyelitis → kidneys.

Pylorospasm In adults, exclude → cancer. See also → abdomen, → esophageal stenosis. In infants and toddlers: injections into the epigastrium and umbilicus scar, also to the → (T) celiac ganglion. In infants: → (T) quaddles, repeatedly if necessary, over the → (T) epigastrium, and through these 1–2 mL procaine or lidocaine preperitoneally. Possibly also 1 mL adjacent to the → (T) brachial artery. BL21, acupuncture's "master point of the stomach," lies two fingers' breadths beside the dorsal midline between the lateral processes of T12 and L1. We set a quaddle on each side here and then go down a few millimeters through this to infiltrate the adjacent tissues. If this is insufficient and before deciding to operate, an injection to the abdominal → (T) sympathetic chain should always be given. This injection has produced convincing results, even in infants (Luzuy, Werthmann, Wischnewski).

Pyorrhea → periodontosis.

R

Rabies → tetanus.

Radial nerve, paralysis/paresthesia of → paralysis and paresthesia of the radial nerve.

Radiation sickness Procaine is administered intravenously (→ (T) intravenous procaine injections) and by → (T) quaddles in and adjacent to the irradiated area. See also → radiation, damage due to.

Radiation, damage due to Any treatment in which ionizing rays are used causes depolarization to a greater or lesser extent of the tissues subjected to radiation. Consequently, it represents a substantial disturbance of tissue metabolism. Dose-dependent teleangiectasia, induration, and ulceration can result. The irradiated area is neurally disturbed and can cause further and remote disturbances elsewhere. We repolarize the tissue, which may attain a board-like consistency, with intra- and subcutaneous procaine injections (→ (T) quaddles). This treatment must be continued for long periods (Werkmeister). Since the surrounding tissue may also have been damaged by stray radiation, it should always be treated at the same time. In radiation ulcer we stimulate the blood supply and granulation by injections all round the edge of the ulcer and below its base (from the edge towards its center). This reinforces all other local measures. Radiogenic enterocolitis (including diarrhea, dysbacteria, and resorption disorders) caused by radiation damage to the intestinal epithelium we treat as described → abdominal disorders. See also → (T) intramural injection of the uterus, → intestinal flora.

Radicular syndrome → cervical syndrome, → intervertebral disk, damage to, → sciatica, → spine, → vertebral artery compression syndrome.

Radiculitis → cervical syndrome, → osteochondrosis, → periosteum, → sciatica, → tendovaginitis.

Rash → skin.

Raynaud disease → neurocirculatory disturbances.

Receding gums → periodontosis.

Reflex anuria → kidneys.

Rejuvenation → geriatric disorders; see also Chapter 3, Section C, Part I, Rejuvenation Through Procaine?

Renal atrophy → kidneys.

Renal congestion → heart, → kidneys.

Renal failure, acute → anuresis, anuria.

Respiratory tract, catarrh of upper → catarrh of the upper respiratory tract.

Retention of urine → urine, retention of.

Retinal phlebitis → eye disease.

Retinitis → eye disease.

Retrobulbar neuritis → eye disease.

Rhagades Use a fine needle to inject all round to produce a → (T) quaddle. In cases that have persisted for a long time before starting neural therapy, it may be necessary to repeat the treatment up to 10 times!

Rheumatism In our view, rheumatism is not a diagnosis but merely a symptom that indicates a failure in the entire neurohormonal autonomic regulating system. A variety of causes can be responsible for the condition. The search for a pathogenic agent or for some generally applicable explanation of its genesis has yielded no results to date and is unlikely to do so in future. Bacteria, cold injury, hormonal, and metabolic disturbances, can be attributed only a small part in the whole picture, as noxious factors that have simply had the effect of placing a strain on the basic autonomic system and consequently on the production and supply of energy. For the practicing neural therapist, it is less important to know all the reactions and shifts that may, for example, have occurred in the hormonal system and are an integral part of rheumatism, than to be fully conversant with the measures that can help the endocrine glands to function once again in a coordinated manner, by controlling the neural dystonia that has become established. The aim of any treatment must

be to relieve the overloaded regulating system and clear away the blockages inhibiting it from functioning properly. We can do this in the following ways:

1. Using segmental therapy to help remove any defective neural control that manifests itself locally. The following means are available to us for this purpose: → (T) quaddles, → (T) intramuscular infiltrations, and injections into areas where painful tissue changes have occurred, such as the → (T) periosteum and points of attachment of tendons and ligaments, to the → (T) afferent arteries and nerves, into the → (T) joints and, finally, the → (T) sympathetic chain and its → (T) ganglia. As supporting treatment with a reversant action in rheumatism, we have learned to value → (T) Ponndorf's and Baunscheidt's vaccinations, and autohemotherapeutic treatment.

   Acupuncture points: TB5 is the most important point for treating articular rheumatism. The patient places their arm across their chest with fingers extended on the opposite shoulder. The point is on the radial side of the ulna midway between olecranon and fingertips. We → (T) quaddle this on both sides. In muscular rheumatism, the "master point of musculature" (GB-34) should be treated bilaterally at the same time. This lies in the dimple in front of and below the head of the fibula.
2. It is advisable to make an early start in looking for an interference field, in order to eliminate this via the Huneke phenomenon, since it may be in overriding control. It is important to do this before the disorder becomes independent of its point of origin (i.e., "autonomous"). In our search we should not forget that the liver controls the regulatory functions of the body's metabolism, and we should therefore test this organ by anesthesia of the abdominal → (T) celiac ganglion.

   → Fibrositic nodules are often found in the sacral region of rheumatic patients. These show that there have been earlier specific or unspecific disorders in the urogenital region, which have not healed completely and are still active as interference fields. Procaine or lidocaine treatment of these nodules helps to eliminate the rheumatic or other types of disturbances caused by them.

Muscular rheumatism To the neural therapist, the presence of "common rheumatism" is always to be taken seriously. We use our hands to make a thorough search of the patient's body and note any hyperalgetic points and tissue changes found, both near the surface and in depth. We know that in the initial phase organic disorders often signal their presence in the segment as a form of "pseudo-rheumatism." Such disorders can be nipped in the bud if we use our injections to block the pathogenic reflex mechanisms and balance out any disturbance of the autonomic equilibrium. We do so with a healing impulse in the system at the right place.

Rheumatism in the right arm and shoulder, for example, can signal a liver or gallbladder disorder long before anything is felt in the abdomen. Rheumatism in the neck is much less often due to external (e.g., sitting in a draught) than internal factors, such as → osteochondrosis. Some conditions, including degenerative processes of the spine and joints, acute and chronic injuries, and overexertion, cause increased muscle tone when ligaments and other heavily inervated structures are irritated. This takes places via neural reflex mechanisms and leads to pain and ischemia.

On the other hand, we also know that segmental symptoms may continue for up to 2 months after an organic dysfunction has been cured and that these segmental disturbances can reactivate the disorder at any time. We can accelerate completion of the healing process and prevent relapse by silencing the peripheral warning signals with our procaine or lidocaine injections.

"Idiopathic muscular rheumatism" occurs in combination with chronic polyarthritis, → spondylitis, dermatomyositis, periarthritis nodosa, lupus e.d., and parasites (trichinosis). It can show us by its wanderings and jumps that the whole of the organism is involved, and the will-o'-the-wisp lights up different areas with painful symptoms only because the principal pathological processes are occurring there for the time being. If we act quickly and thoroughly we can prevent more secondary disorders. We cure the pain and with it all inflammations and circulatory disturbances, fibrositic nodules, muscle spasms, and → trigger points that limit the range of motion and can cause more peripheral tension through mental/emotional discomfort. Once we have helped the regulating mechanisms to recover, the rheumatic reactions manifest themselves in ever more attenuated form and less frequently. If this fails to occur, we need to look for the cause and origin in an interference field and eliminate this before the disorder has become irreversible.

Articular rheumatism What has been stated above also applies here. According to Seyle, the response to irregularly intense stimulation, independent from location and type, is increased hypophyseal activity, which prompts the adrenal cortex to secrete more cortisone. If the stimulus cannot be removed, the hormonal balancing effort can lead to a collapse of the glandular function, for example, in → Sjoergrens' syndrome. In order to compensate for the loss of production in the strained gland, Seyle requests the replacement of hypophyseal and adrenocortical hormones. This therapeutic approach ignores the cause of the condition. It makes more sense to attack

the cause at the place of its origin. From a biological point of view, it is better to restore autonomic regulation and the body's hormone production, than add hormones from the ouside as he suggested. With regard to receptor sites, it simulates adequate hormone levels and can lower the body's own production resulting in adrenal insufficiency. This results in dependence on external hormone supply with all its side-effects and risks, including regulation paralysis. Cortisone therapy results in mere pharmacological inhibition of mesenchymal tissue response. Specific results can only be achieved with thorough segmental therapy and removal of the stress-producing interference fields. Psychological interference fields also have to be considered.

In *polyarthritis*, we need to try to eliminate at the earliest possible moment the control defects due to an interference field. We can do a great deal for any polyarthritic patient simply by giving the harmless test injection into the → (T) tonsils and arranging for the teeth to be thoroughly treated in accordance with our principles. A "non-irritant" scar on the big toe following hallux valgus surgery is often found to cause polyarthritis.

Once the disorder has become autonomous, the only possibility remaining open to us is to attack it by segmental treatment at the site of the loss of function. In this phase, → (T) quaddle therapy is our most reliable weapon. Thus, patients with thickened and deformed finger joints will gratefully acknowledge that they have greater mobility and less pain after a series of quaddles on the dorsal side of the first and middle joints of the fingers. This is, of course, also true for all other → joints. Amelioration or elimination of pain through segmental therapy improves joint function. Subjective improvement should never tempt the practitioner to neglect the search for further causes.

In some cases it will be possible to restore the organism's responsiveness to neural therapy by means of → (T) Ponndorf's vaccinations and other reversant therapies. It is striking that in primary chronic polyarthritis the patient generally has no history of surgery, injuries, difficult labor, tonsillitis etc. This suggests that this form occurs when the regulating mechanisms have had to be used infrequently and have lost their vigilance with regard to this creeping enemy.

Often, the pathological processes that occur in primary chronic polyarthritis are found to be autonomous, and in some of these cases it is possible to break through the reactive paralysis with → (T) Ponndorf's vaccinations and Elpimed injections.

Experience has shown that the effectiveness of mud baths is clearly increased if the patient receives subcutaneous or intramuscular (but not intravenous) injections of small doses of 3–5 mL of a 2% procaine solution. Joachimovits found an explanation for this by showing that procaine inhibits the diffusion effect of hyaluronidase. In other words, procaine increases the action of huminic acid on the basic tissue of the reticulum.

Refer to Chapter 5, Section B, Part I, The Failures of Neural Therapy, and Chapter 8, Section A, Part I, Interstitial Connective Tissue and Interference Fields, for the neurovegetative shock effect produced by x-ray and cortisone therapy, which mitigates against neural therapy.

Rheumatoid spondylitis → spondylitis, rheumatoid.

Rhinitis, atrophic → nose.

Rhinitis, vasomotor → nose.

Rib, fractures, cracks Fifty percent of all rib fractures are generally not recognized radiologically. Not the x-rays, but the severe, circumscribed pain that is exacerbated by deep breathing, coughing, and thoracic compression, provides the indication for injections. X-rays are therefore superfluous where the clinical picture is unambiguous. In greenstick and rib → fractures, we inject 1–2 mL into the thickening, which can usually be felt from the outside, and into the points of maximum tenderness found, i.e., into the fracture line itself and under the periosteum. In addition, we probe with the point of the needle to find the upper and lower edges of the rib and inject 0.5 mL into each of these two sites. If the injections have been sited correctly, the patient should immediately be able to cough and sneeze again without pain. This freedom from pain is maintained for 2–5 days. The injection may then have to be repeated. Adhesive plaster strapping and other bandaging is not needed with this treatment, which is the best and most considerate method and restores the patient to full health and fitness for work more quickly than any other. The conventional overlapping adhesive strapping is inadequate and must be regarded as outdated. If the pleura is involved, or if there is no conclusive evidence that it is not, we inject the → (T) intercostal nerves at a sufficient distance from the injury. When this method is used, the pain that often radiates towards the upper abdominal region also disappears. This is extremely important as a differential diagnosis for ascertaining whether there is any coincidental abdominal injury!

Rigg disease → periodontosis.

Roemheld's syndrome → abdomen.

Rosacea → skin.

S

Scabies → skin.

Scalene syndrome The brachial plexus may be damaged and cause discomfort by pressure where it passes through the scalene notch, by cervical ribs, an abnormally wide scalene attachment, or by a fibrous band between a cervical rib and the first rib. Blunt trauma to the shoulder or cervical spine (such as → whiplash syndrome) and bad posture can also be the cause. The pain is exacerbated when the patient is carrying a load (suitcase, shopping bag etc.). Compression of the → (T) subclavian artery and irritation of the periarterial sympathetic reticulum lead to circulatory disturbances. The symptom can be pain in the arms and shoulder, paresthesia of the ulnar fingers, possibly paresis of the muscles of the thenar eminence and the small muscles of the hand, with cyanosis or pallor and pain. When the patient's blood pressure is taken, a difference is found between the two sides of the body.

Diagnostics Both arms are abducted and brought into horizontal position, the elbows are flexed 90°, and the palms of the hands are turned away from the body. The patient is asked to open and close the hands speedily for 3 minutes. In case paresthesia or pain in shoulders, arms, or hands occurs, the diagnosis is compression syndrome at the superior thoracic aperture. In this case, the neurovascular plexus, palpable posterior to the clavicle and in the axilla, is hyperalgetic.

Treatment Injections to the → (T) brachial or cervical plexus nerves, → (T) ulnar nerve, the → (T) phrenic nerve and → (T) stellate ganglion. If there is no improvement, a pancoast tumor (usually a bronchial carcinoma at the pulmonary apex) may be present. In women, lymph node metastases due to breast cancer or radiogenic tissue induration after breast ablation with radiation treatment can cause similar complaints.

Scarlet-fever otitis In addition to the treatment described in → ears, inject into the tonsillar poles (→ (T) tonsils).

Scars See the section on Scars as Interference Fields in Chapter 2, Section C, Part I, The Interference Field and its Elimination by Means of a Lightning Reaction (Huneke Phenomenon), → keloids, → post-operative pain, → (T) scars.

Scheuermann disease In addition to → (T) quaddles over the affected area and injections to the → (T) periosteum of the vertebrae, the search for an interference field should be a first priority in this. A test of the tonsils, for example, is simple and devoid of risk, and may still be able to clarify possible relationships in the presence of residual symptoms after the disease has subsided. See also → osteonecrosis.

Schizophrenia The literature contains four reports on lightning-reaction cures following paratonsillar procaine injections. None of these cases had responded to shock therapy. This seems to prove that here, at least, the disease was not due to hereditary factors but to an interference field. Any chronic disorder may be due to an interference field!

Sciatica A strikingly large number of patients who come to a neural therapist, often from far away, suffer from sciatica. This is doubtless a sign that the forms of conservative therapy given in general medical practice are all too often inadequate, consisting as they do of embrocations, tablets, radiant-heat treatment, massage, and baths. Neural therapy, on the other hand, is particularly successful in treating this type of patient.

The injections required for this purpose are easy to learn and totally without risk or side-effects. We regard it as a mistake to treat the sciatica patient on a wait-and-see basis. To give vitamin B makes sense only in neuritis of the sciatic nerve, but this is present in only about 10% of all sciatic pain (without backache, muscular spasm, and exacerbation when coughing or sneezing). This can be due to intoxication with heavy metals or alcohol, to infectious disease or lack of vitamins.

As regards the treatment of sciatica, the only rule is that it will have all the more chance of success the sooner and higher we give our injection. This means that even a straightforward → lumbago should be treated as early as possible with → (T) quaddles over the area of muscle spasm and with → (T) intramuscular injections, perhaps with further

injections also into the → (T) sacroiliac joint and the periosteum when this is percussion-sensitive. By these means the pain can be quickly and radically eliminated. All too often → backache that starts suddenly proves to be the harbinger of pain of the sciatic nerve and before long begins to radiate to the leg. This will occur when the → intervertebral disk has prolapsed laterally of the longitudinal ligament and exerts pressure on the root of the sciatic nerve. According to Reischauer, this happens in 80% of such cases at L5, in 15% at SI and 5% at L4. W. Scheidt reports different numbers (see → (T) sciatic nerve). The unilaterally cramped musculature is perfectly capable of twisting the inferior vertebrae to such an extent that additional pressure is exerted on the root of the sciatic nerve. If we can eliminate the muscle spasm, the ischemia, pain and vertebral displacement also disappear, and thus the compression of the nerve is also removed.

The elimination of muscle contractions by itself does not explain our success with true prolapse of intervertebral disks. We explain it as follows: circulatory disorders related to segments or caused by interference fields can lead to edematous swelling and loosening of the collagen fibers of the anulus fibrosus. Also, the dystrophic ligaments loosen and enable the nucleus pulposus to protrude and compromise the nerve root. If we can remove the cause before it leads to irreversible damage to the tissue, the disks, and ligaments, we are able to remove the local dystrophy. This removes the edema and the tissue is able to tighten up. The nucleus is firmly repositioned in its proper location. Thus, when the sciatic nerve announces its presence, an injection must be given as soon as possible into the region of its root or to the sacral plexus (→ (T) sciatic nerve and its branches). This will save the patient a lot of pain and loss of work and income, whilst the physician will save him or herself a long, wearisome, and thankless amount of treatment. However, correct siting of the injections is essential, since they can be only half as effective if the patient does not experience a lightning sensation radiating into the lower extremity. We intentionally inject our small quantities intraneurally, as far larger quantities of anesthetic would be needed for an effective perineural injection. Lidocaine (Xyloneural) diffuses much better through the nerve sheath. In the treatment of sciatica, intracutaneous, subcutaneous, intramuscular, and periosteal injections and infiltrations have only a supporting role, and the same also applies to therapeutic hot baths intended to increase body temperature, local applications of heat and mobilization therapy.

Not every lumbago or sciatica is due to a disk disorder. Joint irritation in the lumbar vertebral region, the hip or symphysis (→ symphysial pain) resulting from structural change or pathological stress upon the joints, degenerative changes, scoliosis etc., can produce irritation of the joint capsule and lead to tendomyosis by reflex action. Tendomyosis is a purely functional disturbance of tendons, ligaments, and muscles, without any demonstrable patho-anatomical changes. Via sensor receptors in the painful, spastic musculature, the disorder is kept in being and amplified by positive feedback. All muscles that are functionally related to the irritated joint have their own specific pain-radiation zones.

Bruegger talks of "pseudoradicular syndromes." The syndromes originating in the lumbar spine and the pelvic arch can radiate to the lumbar region, the buttocks, and the legs. They can occur at night when the patient is lying down and are exacerbated under load. The spastic musculature is pressure-sensitive. Especially at the transition from muscle to tendon and at the tendon insertions there are → trigger points. The affected joints, the symphysis, muscles, and ligaments should be identified by palpation and percussion and treated with carefully pinpointed injections.

We can reach the lumbar vertebral-arch joints with a 60 mm-long needle. The site is one fingers' breadth from the line of spinous processes. We go down at right angles to the skin until bone contact is made and inject 2–3 mL fanwise periarticularly.

If a case of sciatica has its origin in a disturbance of the sacroiliac joint, an injection into this (→ (T) joints) will also help. An injection into the first posterior → (T) sacral foramen may also lead us to our objective more quickly. In other cases, → (T) epidural or → (T) presacral infiltrations may be of more use. In Part III, Chapter 8, which deals with the techniques of neural therapy, there is a detailed description of the method for locating the → (T) sciatic nerve and its branches.

In acupuncture, needles are set between the first and second, and between the fourth and fifth toes. Injections into these points may also help. As in so many other situations, here, too, an intelligent combination of the possibilities available to us will prove to be a useful polypragmatic approach for obtaining a cure. The practice of neural therapy means that the physician adapts to the circumstances, since there is no rigid blueprint for the treatment of any given symptom or series of symptoms. Whilst all the suggestions made in this book are the products of experience, they must remain suggestions only, not a program that must be run in a rigid sequence!

In any case of acute sciatica attack due to a displaced → intervertebral disk, the vertebral column needs to be intensively stretched by applying ten-

sion to the extremities, and this should be followed immediately by an injection of a generous quantity of a local anesthetic to the root of the sciatic nerve. According to Reischauer, 26% of all operatively and conservatively treated sciatica presents with a postsciatic regulatory disturbance, with sciaticalike pain radiating from the sacroiliac joint to the flexor and lateral aspects of the leg. They produce dysbasia as in intermittent claudication, which forces the patient to halt after walking more or less short distances. Arteriography does not produce any pathological findings in such cases. A few injections to the lower → (T) sympathetic chain at L3 are best for treating this dysbasia. A guide to examining the patient with a view to determining the level of the lesion in sciatica caused by a displaced intervertebral disk is given in → (T) sciatic nerve and its branches. (See Table 3.**5**, p. 346).

In sciatica as in practically all other conditions, local treatment with the injections listed above may not prove sufficiently effective. In such cases it is perfectly possible that, in the subsequent search for an interference field, a "disk-provoked sciatica confirmed by radiographs" is eliminated by lightning reaction, for example, after an injection into a heavily scarred tonsillar bed, into the → (T) prostate or the → (T) pelvic region, in so dramatic a manner that patient and doctor can hardly credit such a sudden turn of events.

Scleredema → skin. → (T) Tonsils are often found to be the interference field responsible for this.

Scleritis → eye disease.

Scleroderma According to Leriche, scleroderma is not a → skin disorder as such. In his view, the atrophy of connective tissue and sclerosis are the result of a → neurocirculatory (vasoconstrictor) and internal secretory disorder, with disturbances in the calcium metabolism (hypercalcemia, decalcification of the bones, calcium deposits in the skin). This disorder is painful and slowly progressive. In view of Leriche's successes with sympathectomy and parathyroidectomy, we give procaine or lidocaine intravenously (→ (T) intravenous procaine injections), to the → (T) stellate ganglion alternately left and right or to the superior cervical → (T) ganglion, bilaterally to the lumbar → (T) sympathetic chain, to the → (T) celiac ganglion, and into the → (T) thyroid. Initially, treatment should be once weekly, then progressively at increasing intervals up to 4 weeks. If this treatment is ineffective, find the interference field.

Sclerosis, amyotrophic lateral → lateral sclerosis, amyotrophic.

Sclerosis, coronary → heart.

Sclerosis, multiple → multiple sclerosis.

Sclerosis, posterior spinal → tabes dorsalis.

Scorpion stings → insect bites.

Seizure → epilepsy, → stroke.

Sensory disorders → neurocirculatory disturbances. Professor Schweigart, the father of trace elements, suffered for years from a sensory disorder in his right hand. The sensation in his fingertips had been lost following a long-suppurating lesion in his right wrist joint caused by a plant thorn. A little procaine into this scar promptly restored normal sensation in the segment and, in addition, provided a welcome cure of an incipient hip arthrosis via the Huneke phenomenon.

Sepsis In Vishnevski's view, sepsis is a complex neurodystrophic process. According to him, the primary focus of infection can cause general septicemia only if the neurovegetative system permits. But before it can occur, there must first have been a substantial shift in its normal reactive state as a result of earlier irritant stimuli.

In addition to specific antibiotics, neural therapy should also be accorded its appropriate place in any treatment given. Infiltration at the earliest possible moment with a local anesthetic around the primary focus can stop the incipient dangerous processes before an irreversible state is reached. In addition to → (T) intravenous injections, it may also be advisable to inject procaine or lidocaine into the stellate or → (T) celiac ganglion, or lumbar → (T) sympathetic chain, depending on the site of the primary focus. See also → snakebite.

Serum sickness Immediate improvement can be achieved by → (T) intravenous injection and especially by infiltration around the site of the serum injection. See also → allergies.

Sexual arousal disorders Often, the reason for this condition is a scar at the posterior commissure, in the vagina, or at the perineum. Repeated infiltration of the → (T) scars with local anesthetics can remove the complaint rather quickly: → pelvis, → gynecological dysfunctions, autonomic, → sexual disturbances, → vaginismus.

Sexual disturbances Lack of libido, impotence, impaired erection, premature ejaculation and the like generally occur together with other symptoms of →

neurodystonia or dysfunctions such as → insomnia, → hyperhidrosis, circulatory disorders, and impaired concentration. If there is no → neurasthenia, and no interference field can be found to account for this condition, try reversant treatment by repeated → (T) intravenous injections and segmental therapy with → (T) quaddles over the sacral and bladder regions, injections into the → (T) prostate, → (T) pelvic region, or thyroid. → (T) Epidural anesthesia may also be tried. See also → hormonal disturbances. Aslan has been able to provide objective evidence of the stimulant effect of procaine on sex hormone production. Following procaine treatment, small quantities of estrogens appeared even in very old women, while in men the testicles also produced fresh hormones. See also → impotence, → sterility.

Shingles → herpes zoster, → skin.

Shock In addition to the correct positioning (head in lower position) and stopping the bleeding, it is one of the most important immediate measures of the physician to stop the pain and prevent additional neurogenic dysregulation. An injured person presenting with symptoms of shock can be made fit for transport with a minimum of delay by the → (T) intravenous administration of procaine. Being a beta blocker, procaine reduces the hyperactivity of the sympathetic system that results from stress. It has a regulating effect on the central nervous system and circulation, reduces vascular permeability, and is therefore recommended as an adjunct in the treatment of shock. Cardiovascular agents should not be given. Narrowing of the vessels increases the risk of capillary ischemia, which increases dysregulation. Procaine dilates the vessels and assists the restoration of the body's regulation. Injections to the → (T) celiac ganglion terminate vascular spasms in the splanchnic and kidney area! Cardiovascular agents are only indicated in the case of trauma with vagus response accompanied by apparent brachycardia. At this moment, administration of oxygen and infusion with volume substitutes is of secondary importance.

Anaphylactic shock In animal experiments, anaphylactic shock can be prevented by the prior administration of procaine, and the same applies also to experimentally induced collapse (Hirsch, Siegen).

Hypothermic shock → p. 351 (Gerecht).

Pleural shock In injuries to the thoracic cavity, such as gunshot wounds penetrating the lungs, it has been found possible to reduce loss of life to a striking degree by anesthesia of the → (T) stellate ganglion. Injections to the → (T) sympathetic chain have also proved successful as therapy and prophylaxis for transfusion and anaphylactic shock. In traumatic and post-operative shock, injections to (but not into!) the → (T) carotid artery are also indicated. See also → allergy.

Traumatic shock The treatment of and prophylaxis against shock by means of procaine injections proved itself in the Red Army during World War II. According to Kolodkin, every wounded man at risk from shock was given a prophylactic intravenous procaine injection. Twenty-three percent additionally received "sympathetic-system blocks" and 86.6 % also had anesthesia of the sciatic nerve or the segmental nerve roots supplying the region of the injury. In addition, for all injuries to extremities, standing instructions called for the tissues proximal to an arterial tourniquet to be generously infiltrated with procaine before releasing the tourniquet. This proved capable of preventing collapse of the regulating mechanisms so frequently encountered in traumatic shock.

Shoulder-arm syndrome → cervical syndrome, → osteochondrosis, → scalene syndrome, → suprascapular-notch syndrome.

Shoulder, dislocated → dislocated shoulder.

Shoulder, frozen → joints, disorders of, → periarthritis of the humeroscapular joint.

Shoulder joint, disorders of → joints, disorders of.

Silicosis The → (T) intravenous injections and → (T) quaddle therapy described in the entry under → lungs can frequently produce striking improvement!

Sinusitis → nose.

Sjögren syndrome Chronic polyarthritis with inflammatory degenerative changes of the secretory glands, which lead to drying out of the mucous membranes, the eyes and mouth being especially affected. We regard the glandular atrophy as indicating a progressive circulatory deficit.

Treatment Apart from the relevant segmental treatment, in which the stellate, Gasserian (otic) (parotid gland, cheek glands), submandibular (oral cavity), and pterygopalatine (lacrimal, nasal, and palatine glands) → (T) ganglia as well as the → (T) palatine nerves play an important role, always look for an interference field, concentrating particularly on teeth, tonsils, and, in women, the pelvic region.

Skin Embryologically, both skin and nervous system are ectodermal organs, the skin being the "terminal plate of the autonomic system." For 5000 years, the

Chinese have been proving with acupuncture that it is possible to send an unspecific curative thrust from the skin into the system. Kneipp, Baunscheidt, Ponndorf etc., have to some extent revived this ancient medical lore. Ultimately, all balneological methods, radiation therapy, therapeutic x-ray treatment etc., are effective only because they address themselves to the same electrical system on which life and all vital processes depend.

The channel from the periphery to the center is available for traffic in both directions. Thus, numerous skin disorders are due to → neurodystonia, in which the skin's reaction threshold is lowered. In many cases, sensitivity of the skin through an interference field has been demonstrated ex juvantibus to be the cause of the skin disorder. Consequently, the treatment of these via the autonomic nervous system makes perfect sense and promises success. We regard the symmetrical tendency of eczemas and many other skin disorders as proof of centrally controlled neural processes. The formation of foci of infection is explained by increased irritability of the terminal conduction system, as a secondary effect produced by the primary focus. This should therefore receive special attention. Sites of efflorescence on the skin can sometimes indicate links with organic disturbances within the same segment. Bacteria, toxins, chemicals, and other skin irritants can become effective only when the ground has been appropriately prepared for them via the nerves.

Numerous authors (Aslan, Marx, and others) have confirmed procaine's eutrophic action on the skin, in which apparently the nervous and → hormonal factors work together, with a demonstrable increase in skin temperature. Thus it has been possible to produce substantial improvement in senile skin changes, for example, in → ichthyosis and senile hyperkeratosis, simply by the unspecific administration of procaine.

Segmental Therapy in Skin Conditions

1. An → (T) intravenous injection of procaine acts in several ways, all of which are beneficial: as a reversant agent, as a relaxant, to relieve itching and pain, as an anti-allergic and anti-inflammatory substance, and by reducing vascular permeability. Therefore, we always use it as basic treatment.
2. If the skin lesions are not extensive, we → (T) quaddle locally in the affected areas and infiltrate subcutaneously. Where more extensive areas are affected, we detach the subcutaneous tissue with air before injecting the procaine, using the same approach as in treating → (T) scars. By erasure of "mnemidermia," the skin's memory, the reflex pathways that produce itching, weeping eczemas, and other unpleasant symptoms are also eliminated. As a rule, treatment will need to be repeated at progressively longer intervals.
3. In skin disorders affecting extensive areas, injections into the → (T) nerves (afferent) and arteries, and especially to the → (T) sympathetic chain and its → (T) ganglia, are also recommended. The injection sites will vary according to the site of the lesion. In this way, I have been able to cure a number of patients with extensive acne by injections to the → (T) stellate ganglion.

If local treatment within the affected segment proves of no avail, it is particularly important in this type of case to remember to look for the interference field responsible. Especially with chronic → eczema, recurring rashes, chronic → urticaria, and lupus erythematosis, the increased sensitivity of the skin, which affects the genesis and progress of skin disease can be due to an interference field, such as tonsils, teeth, scars etc. Itching, burning, and stinging are neural reactions that immediately (or sometimes after initial worsening) disappear with the lightning reaction. This is an indication that the interference field has been located and proof of a causative connection, which is otherwise hard to produce in skin disorders. If skin disorders occur in early infancy, the first scar that every human being bears, the umbilicus, must not be forgotten. In premenstrual exacerbated skin disorders (for example, acne), the → pelvis is included in the treatment; in autonomic excitability the → (T) thyroid is also included.

Practice teaches us that even → mycosis, athlete's foot, and other sporadic skin disorders can be favored by interference fields that enable them to penetrate the skin and remain persistently established. Sporadic infections and pyodermia need a cool, humid skin environment. With the elimination of the interference field, the peripheral blood supply and the autonomically increased sweat secretion return to normal in areas that have been disturbed. This can be proved by thermography. The substrate for fungus and bacteria is thus no longer available. See the following: → alopecia; angioneurotic edema; burns; cradle cap; dermatitis; eczema; frostbite; granuloma annulare; herpes zoster; ichthyosis; injuries; insect bites; insulin lipidystrophy; keloids; kraurosis vulvae; leukoplakia; mycosis; nipples, cracked, eczema of; obesity; pruritus; psoriasis; rhagades; scleroderma; teleangiectasia; upper lip, furuncles of; urticaria; varicose ulcer of the leg; warts.

Case History 28: 60-year-old Eczema Sufferer

A.K., female from CH-5117 Habsburg, 60 years of age, arrives with chronic eczema located mainly on the palms of her hands. It has been therapy-resistant for 54 years. Since she was a schoolgirl she had to wear yarn gloves. This had always limited her in all areas of work and daily life. She brought with her a long list of previously involved specialists, hospitals, homeopaths, etc. that have cost her a fortune but were unable to alter her condition.

Health history: Tonsillectomy when she was 5, scarlet fever supposedly at 6 and 8. After the first scarlet fever, the eczema began. She gave birth at 26 and 28, both times with perineotomy, three times curettage. At 45, a fracture of the lower leg was screwed together. Five years later, menopause began and brought with it kraurosis vulvae and strong hot flushes that are still ongoing.

Therapy: The eczema improved considerably after three injections into the tonsillectomy → (T) scars: her fingers were not swollen, the skin less red and hard, the cracks had almost healed, and the itch decreased. One injection to the → (T) Frankenhauser's ganglia and two injections into the → (T) thyroid ended the menopausal hot flushes and the pruritus. Her left side was more affected than the right. The best effect on the eczema on the left side had been the fourth treatment with procaine intravenously and a stellate injection left. The last rhagades disappeared and the skin became soft and normal. Two and 4 months later the tonsillectomy scars had to be treated again. After that, the hands remained symptom-free and the woman was able to wash herself with soap, do her daily chores in the house, and help in her husband's drug store. None of this was previously imaginable. The eczema that had been therapy-resistant for 54 years was maintained by the tonsillectomy scar interference field but was still curable after all this time with the Huneke therapy.

Skin fissures → rhagades.

Smallpox vaccination, complications after According to Krause, excessive local and general reactions, such as post-vaccination headache, high fever, insomnia, backache, vertigo, lack of concentration etc., which can persist after the local reaction has subsided, can be readily controlled and eliminated with procaine. Injections are given and the cellulitis infiltrated towards the center with about 5 mL procaine, at several sites surrounding the inflammation, i.e., in the healthy, unaffected parts. In 95 % of all cases, the attendant symptoms and sequelae quickly disappear. An → (T) intravenous injection on the side of the vaccination can also accelerate resolution.

The following case history demonstrates that a smallpox-vaccination scar can also turn into an interference field.

Case History 29: 4-year-old Mario

In June 1966, the then 4-year old Mario D. from L. was given a triple vaccination against whooping cough, diphtheria, and tetanus, directly into an earlier smallpox-vaccination scar. A fortnight later, he started to have pains in the legs. After 4 weeks of in-patient orthopedic and pediatric treatment, the diagnosis of progressive muscular dystrophy was made, and this was confirmed by the university teaching hospital following an electromyogram and a biopsy from the thigh. The mother was told that the boy was suffering from a hereditary disease, which, at the present state of scientific knowledge, was incurable and that she must accept the fact that this progressive disease would lead to the young patient's complete helplessness within 6–8 years. In March 1967, I injected procaine for the first time into and under the smallpox-vaccination scar. This injection was repeated 4 weeks later. Over a period of 2 years I gave him a total of seven treatments (with injections only into the scar!), and there was progressive improvement on each occasion. The final examination at the university hospital was so good that he was discharged from observation in 1969 as being in perfect health. He has since become a professional soldier. His disorder was thus clearly not hereditary, but one due to an interference field located in the vaccination scar, which simulated the symptoms of progressive muscular dystrophy. Anyone not prepared to recognize such links as real and who does not act accordingly will obviously never be able to cure such disorders due to interference fields.

Smell, disorders of → nose (anosmia).

Snakebite We have been taught that snake venom is a neurotropic toxin and, as such, that it has a special affinity for the nervous system. It is believed to travel in the neurilemma from the site of the bite to the central nervous system where it develops its full toxic effect. We have accepted this theory without asking ourselves whether anyone has ever seen the poison traveling along the nerve sheaths.

In Anglo-American and Soviet publications we encounter a number of references to the fact that the infiltration of procaine around the wound has proved to be the best possible treatment. Attempts to explain this have been made by suggesting that procaine apparently neutralizes the effect of the toxin. But this is difficult to believe, since totally different toxins are involved, depending on the type of snake, some being hemolytic and others neurotropic in their effect. But anyone who looks at the pathways to illness from the viewpoint of neural pathology and neural therapy is forced to the view that the effects of neurotropic toxins (also, in some respects, those of bacteria, viruses, and allergens)

can be readily explained by the interference-field theory. The toxin produces strong depolarization, i.e., an interference field, at the entry site, which neurally hyperexcites the reticular formation. This overstimulation is electrical, not chemical, and produces a stimulus response in the form of an alarm and shock reaction, which may place the victim's life at risk. Procaine should be infiltrated around the wound as soon possible, preferably within the first half-hour, since it prevents the toxin from having this depolarizing effect. The toxin is thus unable to act on the nerves and cannot develop its full effectiveness. Even if interference impulses are formed, they cannot be propagated, because nerve conduction is interrupted for the duration of the anesthetic effect, and transmission of the stimuli is blocked. The excessive irritant action of the various toxins is countered because the local anesthetic eliminates this local depolarization and restores normal bioelectrical conditions.

Neural therapists from areas with opulent snake population such as South America, Africa, and Arabia have confirmed the effectiveness of my treatment recommendations through their daily practice. The annual global number of deaths caused by snakebites is estimated between 30 000 and 50 000. These numbers in mind, immediate injections around and under the site of the bite with local anesthetics (most likely available in every physicians office in the world) seems to be a worthwhile first aid effort.

It ought to be a simple and a grateful task to design experiments to test my new theory of the mechanisms concerned in the way that neurotropic toxins act (also in tetanus, rabies, diphtheria etc.) and to draw the appropriate therapeutic conclusions from such investigations. What has been stated here also applies to the effects of stings from the spines of poisonous fishes and scorpions, spider bites and → insect stings, which generally run their course without any problems or complications when they are treated with local anesthetics.

Treatment Procaine or lidocaine is injected into, under, and around the site of the bite, if possible within the first half-hour, and the injections repeated at half-hourly intervals if necessary. In severe cases, injections are also advisable to the → (T) stellate ganglion and always, if available, the appropriate snakebite serum should also be given.

Spasm, facial Injections to the → (T) stellate ganglion and the peripheral branches of the facial nerve.

Spasmodic polyuria Spasmodic spontaneous flow of large amounts of urine, a reduced form of→ diabetes insipidus, i.e., an irritation of the diencephalon-pituitary system. See also → migraine, → migraine, cervical.

Spasmodic twitching of the eyelid → cillosis.

Spasms of the abdomen: → abdomen, → kidneys; of the thorax: → lungs.

Spasms, coronary → heart.

Spasms, intestinal → intestinal spasms.

Spastic paraplegia → paraplegia, spastic.

Spasticity, extrapyramidal Improvement can be obtained by injecting 1 mL of procaine into the patellar and Achilles tendons.

Sphenopalatine (pterygopalatine) ganglion, neuralgia of (Sluder neuralgia) Neuralgia of the → (T) pterygopalatine ganglion. This is always unilateral, the symptoms being protracted as deep pain at the root of the nose and behind the eyes, especially at night. The pain may radiate to the ear, maxilla, pharynx, and mastoid process, and is often accompanied by lacrimation and hypersecretion from the nose, with characteristic sneezing fits.

Treatment Anesthesia of the → (T) pterygopalatine ganglion. During an attack, the patient can insert a cottonwool stick moistened with a mucosal anesthetic (2 % pantocaine, 4 % lidocaine) placed well up into the anterior part of the middle and upper nasal passage. This should be left in position for about 5 minutes to anesthetize the mucosa near the ganglion. In searching for an interference field, special attention should be paid to the teeth, paranasal sinuses, and tonsils.

Spinal gliosis → syringomyelia.

Spinal sclerosis, posterior → tabes dorsalis.

Spine See the section on Spine: the Vertebral Column as an Interference Field, in Chapter 2, Section C, Part I. Any degenerative change in the spine can be caused by irritation of the sympathetic system, leading to vascular spasms and their disastrous sequelae. On the other hand, any disorder affecting the spine can also involve the nervous system as a result of irritation or damage to sympathetic fibers, nerve roots, or the spinal cord. Typical of vertebragenic disorders is their variable, spasmodic, relapsing character. Therapy has the task of eliminating the irritation of the nerves and return the circulation to normal. This can to some extent be achieved by chemotherapy, and always by competent neural

therapy. See also → backache, → intervertebral disks, damage to, → joints, disorders of, → osteochondrosis, → sciatica, → spondylitis, rheumatoid, → spondylolisthesis, etc.

Spondylarthrosis → spondylitis, rheumatoid.

Spondylitis, rheumatoid Ankylosing spondylitis is regarded as belonging to the rheumatic group of diseases. Ninety percent of all cases affect young men between the ages of 20 and 30. It starts in the sacroiliac joints (important for early diagnosis), but the inflammation and later sclerosis and ossification then spread to the vertebral column, its joints, and the intervertebral disks. To date it has not been possible to identify a pathogenic cause.

Treatment Substantial relief from the excruciating, violent pain and spasm in the neck and back muscles can be provided by → (T) quaddles over the sites of the pain and by → (T) intramuscular infiltration. Repeated injections into the lateral cords of the brachial and cervical plexuses of the → (T) nerves (afferent) can provide relief. If the vertebrae prove sensitive to tapping, inject → (T) preperiosteally to the periosteum of those concerned. This is not by any means a purely symptomatic form of treatment but acts by breaking through the pathogenic reflexes, which form a vicious circle. If necessary, also inject into the → (T) joints, i.e., the sclerosing sacroiliac and hip joints, and also the costotransverse and small vertebral joints. A → (T) nasal spray with 2% pantocaine may be enough to give relief, and → (T) Ponndorf's or Baunscheidt's vaccinations over the vertebral column can also be recommended. If segmental therapy fails, a search must always be made to find the interference field responsible. First test the teeth, tonsils, and sinuses, but the prostate is also quite often the culprit. See also under → rheumatism.

Spondylolisthesis Congenital spondylolysis (cleft in the vertebral arch) is rarely the cause of slipping of the vertebrae. Pseudospondylolisthesis, without the cleft, is by far more common. The ventral dislocation of a lumbar vertebra combined with damage to the → intervertebral disc is the result of dystrophic loosening of the structures that hold the vertebra and disc in place. The pain is due to spinal or radicular irritation.

Therapy First goal of the treatment is the elimination of pain. This is done with → (T) quaddles and fan-shaped → (T) intramuscular infiltrations into hypotrophic and tight muscles. More effective are injections into and to the vertebral → (T) joints involved and to the roots of the sciatic nerve (→ (T) sciatic nerve) at the level of the irritation (usually L4). With cessation of the pain, the disturbed area receives better blood flow and nourishment, and supporting ligaments are stabilized. The dislocation takes place with less frequency. Recurring → backache can be reduced this way and will occur in increasing intervals only. If this does not help, search for the interference field.

Sports injuries → injuries.

Sprains Sprains often result in only minor tears in the ligaments, but their clinical symptoms may be totally disproportionate to the anatomical damage. This is due to the reflex vasomotor disturbance produced by any → injury. This type of regulatory disturbance manifests itself especially with sprains of the richly innervated joints of the extremities and can be inhibited and eliminated with procaine. We therefore agree with Fontaine when he demands that:

1. Minor sprains should first be made pain-free with procaine and should then be moved, not immobilized.
2. Moderate sprains should also be infiltrated with procaine. In foot injuries, the patient should begin by moving the affected extremity from a recumbent position, in order to avoid the risk of completely tearing the injured ligament.
3. Only severe sprains, especially of the knee, fall within the ambit of surgery. But early procaine treatment is also indicated in these, in order to block the dysregulatory reflexes, even if reduction or surgery under general anesthetic is to be undertaken later.

As soon as possible after injury, we therefore set → (T) quaddles all around the joint and then infiltrate the painful areas, particularly the ligamentous attachments, fanwise through the quaddles. An elastic bandage is then applied. The sooner this treatment is given, the better the success rate. As a rule, this form of treatment makes it possible to avoid absence from work, at least in the case of minor sprains, and to reduce very substantially the time needed to achieve a complete cure. But it is also worthwhile in less recent cases, and procaine is much to be preferred to steroid preparations. It prevents infection, whilst "cortisone and its derivates tend to encourage infectious complications unless asepsis is strictly observed" (Fontaine). The proportion of successful cures obtained by either type of preparation is identical.

Spur, calcaneal → calcaneal spur.

Squint → eye disease.

Stammer This is generally a → psychogenic disorder. However, there have also been reports of cures by lightning reaction following injections into scars and tonsils. These show that stammer can also be due to an interference field.

Status epilepticus → epilepsy.

Stenocardia → heart.

Stenosis → abdomen, → cancer, → esophageal stenosis, → kidneys, → lungs.

Sterility → pelvis. If dystrophic changes in the uterine mucous membranes lead to sterility, neural therapy can improve blood supply to the uterus and loosen the endometrium, which improves the environment for nidation. This has been confirmed through many blessed outcomes after years of childless marriage. For segmental therapy procaine injections to the lateral processes of the fourth lumbar vertebra have also been recommended. If thyrotoxicosis is also present, see → thyroid, → thyrotoxicosis, → sexual disturbances.

Still disease This is a chronic polyarthritis with lymphatic nodes, enlargement of the spleen and pericarditis, which occurs in childhood. In his book *Das Sekundenphaenomen* (*The Lightning Reaction*), F. Huneke described the cure of an advanced case after an injection to the → (T) tonsils. Hence: find the interference field!

Stomach diseases → abdomen.

Stomatitis An earlier attack of stomatitis may leave behind an interference field. In such cases anemic areas of mucosa are found to which it is possible to restore a normal blood supply by one or more submucous procaine injections.

Strabismus → eye disease.

Strain → injuries.

Stroke Cerebral function depends largely on the state of the vascular system. In 70–80% of stroke incidents, the origin is ischemic necrosis. The hemorrhage or, in the case of cerebral embolism, the vascular occlusion is only partly responsible for the functional impairment. The vascular shock due to the restriction of the blood flow by the vascular nerves further impairs the affected part of the cerebrum. Subsequently, other complications occur because the waste products of hemorrhagic necrosis can no longer be removed but are stored in the ganglionic cells, causing the restriction or complete inhibition of cell function.

Therapy Our task consists in producing relaxation of the vascular spasm and in reducing the damage by bringing about a substantial improvement in the blood supply in the deficient and damaged vascular sector.

Procaine injected intravenously (→ (T) intravenous procaine injections) also increases capillary resistance and dilates the blood vessels. Injections to the → (T) vertebral artery can also contribute to improving the conditions of cerebral blood supply. → (T) Quaddles over the parietal bones and injections under the → (T) scalp down to the periosteum additionally help to restore neural equilibrium in the cerebrum beneath.

But the potentially disastrous vascular spasm and stasis is most effectively treated by an injection to the → (T) stellate ganglion on the side of the lesion (i.e., to the left stellate ganglion in the case of right hemiplegia with motor aphasia due to involvement of Broca's center). The reduction of the cerebral edema following administration of the local anesthetic suggests a return to normal of the endothelial barrier. Weekly injections given intravenously, under the scalp and into the stellate ganglion, will favorably influence the motor and vasomotor functions, substantially improve the patient's mental and physical mobility, and restore emotional stability. The signs of depression, compulsive weeping, and sensitivity to weather change will disappear first. Anesthesia of the stellate ganglion on the side of the lesion causes a marked reduction in the muscular hypertonicity of the paretic side for several hours. Physiotherapy might well make greater use of this fact.

Obviously, such treatment is most effective if started immediately after the patient has suffered a stroke. But whilst the chances of success become less as the interval between the stroke and the start of treatment increases, an attempt should still be made, with a series of about 10 treatments, even in less recent cases. With some luck we can salvage the dysfunction; destruction is irreversible. Our injections also form the best possible prophylaxis against a further attack. Central pain may occur at anything from weeks to years after the cardiovascular accident. This causalgiform pain is thalamic and is felt in a circumscribed area in the face or paralyzed limbs. It indicates that the blood supply to the regions where the pain is transmitted is reduced. Stellatum anesthesia on the side of the lesion, i.e., opposite the pain, will reliably eliminate pain whenever this recurs. The same treatment is also used for stroke due to cerebral ischemia. Mandl reported that injections into the stellate ganglion reduced

mortality due to cerebrovascular accidents by about 50%. According to a report from the Surgical Society of California, paralysis disappeared in 55% of the cases treated in this way. The report stated "the results are surprising and incredible."

Nambiar recommended procaine injections into the → (T) carotid artery for the clinical treatment of hemiplegia. In 1973, Bogolepov carried out morphological, histological, and chemical investigations of the carotid sinus and the cerebral sectors supplied by the internal carotid artery in 67 patients who had died of acute cerebrovascular (ischemic or hemorrhagic) accidents. In all these he found pronounced signs of irritation and dystrophy in these areas, and also in the cervical and vagal ganglia. As a therapeutic consequence he therefore recommended procaine injections to the carotid sinus (→ (T) afferent arteries). In ischemic lesions he advocated injection to the contralateral sinus.

The hemiplegic patient's ability to walk may be improved in follow-up treatment by reducing the muscle spasm with injections of 1 mL of procaine into the patellar and possibly also the Achilles tendon, and into the extensor tendons of the big toe. The contracture of the paralyzed hand relaxes during the injection of intracutaneous → (T) quaddles over the finger joints on the extensor side, though not always with lasting effect. This, unlikely as it may seem, is a fact that any practitioner can prove for him or herself and demonstrates yet again the wide-ranging effect of quaddle therapy.

Stump pains → amputation-stump pains, → phantom-limb pains.

St Vitus dance → chorea minor.

Stye 0.5 mL of procaine should be injected as soon as possible into the → (T) nerve-exit point of the supra- or infraorbital nerve or, using the finest needle available, directly into the stye. One of my women patients regularly had a stye on her right upper eyelid as a prelude to gallstone colics. In our experience, the right supraorbital nerve is closely linked to the liver-gallbladder sector. Once her pelvic interference field had been found and eliminated, both the colics and the styes disappeared.

Styloiditis → periosteum.

Suboccipital neuralgia → headache, → migraine, cervical, → (T) occipital nerves.

Sudeck–Leriche syndrome → post-traumatic osteoporosis.

Sudoriferous abscess Early infiltration around and under the sweat glands affected. See also → abscess, → furuncles, → inflammation.

Suppression of urine → urine, retention of.

Supraorbital neuralgia This symptom often accompanies disorders affecting the eyes (→ eye disease) or the paranasal sinuses (→ nose). Supraorbital neuralgia on the right may indicate a disturbance in the right upper quadrant of the → abdomen. See also → (T) nerve-exit points.

Suprascapular-notch syndrome → joints.

Surgical sequelae Reference has already been made to → scars as possible interference fields. Here, I merely want to quote what the great surgeon Leriche wrote all of 60 years ago:

> Surgery has the same effect as an accident. We can never operate on a patient without producing trauma and this can act as the origin of remote reflex disorders. I believe that surgery can be made responsible for 75% of all post-operative disorders. In their origin they are due less to chemical than to neural changes. The best prophylactic treatment for these is the systematic use of the extraordinary ability of Novocaine to block the nerve endings. By this means we can safeguard ourselves against the production of post-traumatic vasomotor disturbances.
>
> Many scars have a dynamism of their own. This produces non-physiological irritative stimuli in the region of abnormal nerve endings. Functional, muscular, and trophic disturbances thus occur by reflex pathways. Novocaine can eliminate these either temporarily or permanently.

All surgery produces a stress situation for the patient, having both psychological and physical components, which vary according to the patient's personality. Studies at Vienna University (Fischl et al.) have shown that even non-pinpointed administration of procaine clearly improves the patient's psychological state, his or her physical and mental performance after surgery. The group treated with procaine was compared with a control group treated with placebos and showed a noticeably lower consumption of analgesics in the post-operative phase. The → post-operative pain phase was objectively shown to be shorter and easier.

Swallowing, difficulties in See → (T) vertebral artery, → (T) stellate ganglion, → (T) superior laryngeal nerve, → (T) glossopharyngeal nerve, → (T) tonsils.

Sweat glands, apocrine, disease of → skin.

Sweating, outbreaks of → hyperhidrosis, → neurodystonia, → thyroid.

Sydenham's chorea → chorea minor.

Symphysial pain accompanying laxity of the pelvic girdle During pregnancy, the connective tissues of the symphysis and the sacroiliac joints are relaxed. If they do not become sufficiently firm again following delivery, pain may occur in the pelvic and sacroiliac region. In such cases the symphysis and/or the interarticular space between ilium and sacrum will be tender when palpated.

Preferred treatment Inject a local anesthetic into the hyperalgetic points found by palpation in the symphysis and interarticular space (→ (T) joints). See also → pelvis.

Syphilis, cerebral The standard treatment for → headaches, i.e., injecting procaine intravenously (→ (T) intravenous procaine injections) and under the → (T) scalp allows the violent headache of cerebral syphilis to subside. Evidently, this treatment makes it possible to eliminate the inflammatory irritation of the brain.

Syringomyelia Ulcers and gangrene: → neurocirculatory disturbances. The loss of function may respond to injections into the → (T) stellate ganglion or the lower portions of the → (T) sympathetic chain.

Systoles, premature → heart.

T

Tabes dorsalis The stabbing pains can sometimes be influenced by → (T) paravertebral infiltrations, the gastric crises by intra- and subcutaneous injections of procaine or Xylocaine etc. into the segments T6 through T9 or by injections into the → (T) epigastrium and the appropriate → (T) sympathetic chain. If the bladder is affected, we also set → (T) quaddles over the region of the bladder and sacrum and give → (T) intravenous injections to stimulate diuresis and peristalsis. See also → neurocirculatory disorders.

Tachycardia → heart.

Tarsalgia → periosteum.

Tarsal-tunnel syndrome Irritation of the → (T) tibial nerve, with pain in the foot, especially the sole, and numbness in the second to fifth toes and the lateral side of the foot.

Teleangiectasia The dilatation of the smallest of the terminal blood vessels becomes visible in the skin as a fine vascular network. These are injected with a local anesthetic, using a fine needle (size 20). The vessels will immediately blanch. After brief superficial circular massaging movements we apply a pressure bandage. See also → cancer, → radiation, damage due to.

Temporomandibular joint → joints, disorders of. If superficial → (T) quaddle treatment proves inadequate, we use a short, fine needle to inject 1 mL of procaine directly into the temporomandibular joint. Ten millimeters in front of the tragus of the ear towards the alae nasi a distinct dip can be felt under the skin when the patient opens and closes their mouth. We ask them to open wide and insert the needle at this point. At a depth of about 10 mm we reach the anterior part of the joint capsule. If this treatment fails, the patient should be referred to a dentist.

Temporomandibular joint, neuralgia of → neuralgia of the temporomandibular joint.

Tendon-sheath disorders → carpal tunnel syndrome, → tendovaginitis.

Tendovaginitis There are several well-known variations and degrees of this disorder: serous, crepitant, and stenosing tendovaginitis. Tenopathy is often an attrition symptom due to excessive strain on a tendon as a result of rubbing produced by constantly repeated identical movements. The best treatment from both a social and economic viewpoint is intracutaneous and subcutaneous fanwise infiltration down into the tendon sheaths. If one aspires while giving pressure once in a while during infiltration, a yellow exudate is pulled into the syringe. This shows us when we have penetrated the tendon sheath with the tip of the needle.

It is often possible to cure the → inflammation by a single treatment of this kind, without the need to immobilize the affected member. Sometimes, in order to achieve a permanent cure and complete fitness for work, it will be necessary to treat the disorder twice or three times and occasionally more often. If an irritation of the nerve roots is the cause, due perhaps to → osteochondrosis of the cervical spine, injections to the → (T) stellate ganglion and the brachial plexus (→ (T) nerves [afferent]) may be indicated. If these also fail to produce results, a search should be made to find the interference field responsible. Supraspinatus tendinitis: → joints, disorders of.

Tennis elbow → joints, → periosteum.

Testes Exclude malignant neoplasm as possible cause. First we set → (T) quaddles bilaterally in the dermatomes T10 to L3 and S2. In addition, we use local injections with a fine needle to the spermatic cord or directly to or into the testicle and, in stubborn cases, try injections into the → (T) pudendal nerve, or → (T) epidural or → (T) presacral infiltrations. In tuberculosis of the testes, this supporting therapy will accelerate the healing process. See also → epididymitis.

Tetanus Reports from various sources state that the infiltration of procaine around fresh → snakebite wounds has proved to be reliable and effective. Like snake venom, tetanus toxin is also "neurotropic."

Since our method and the preparations we use break the conductivity and reverse the depolarization created at the site of the lesion, with its strong interference-field effect, the irritation acting on the nerves can no longer reach the center. It is thus rendered practically harmless almost as soon as it occurs and is no longer able to set off any dystrophic reflexes that might otherwise place the victim's life at risk. In our view, therefore, when looking at the effect of a neurotropic toxin, we are dealing with the creation of an interference field, and we can eliminate this with procaine. Speransky wrote: "More than half of the animals that had been given a mixture of (tetanus) toxin and Novocaine (procaine) did not get sick." However, he had a different explanation for this astounding finding. We know today, that tetanus can only manifest itself in injured depolarized tissue. Procaine repolarizes the damaged tissue and reactivates the body's defense system. This spoils the environment for the tetanus bacillus. The same is therefore likely to apply to rabies, poliomyelitis, smallpox, insect stings, serum sickness, and a large number of other illnesses.

The best treatment of any wound and, at the same time, the best anti-tetanus prophylaxis consists in infiltrating procaine under even the most banal wound. As soon as the first signs of tetanus appear, treatment of the port of entry by infiltration of procaine should always accompany any other clinical treatment! Muscle spasm of the localized tetanic contraction can be eliminated with → (T) intramuscular procaine infiltration only in the initial phase, whilst at a later stage the nerve pathways have already been affected to such an extent that the tonus-regulating action is no longer effective. Porfirev has also pointed out the supporting effect of procaine in the treatment of tetanus. In established severe tetanus, a → (T) cisternal or intralumbar procaine injection following a → (T) CSF pump may also have to be considered.

Tetany During an episode, give procaine intravenously (→ (T) intravenous procaine injections) in addition to calcium. There is such a thing as tetany due to an interference-field "infection." In this, the interference field lowers the irritation threshold for constitutional and conditioning factors. Once the interference field has been eliminated, these become subliminal again.

Thalamic pain → stroke.

Thomsen disease → myotonia, congenital.

Thoracic contusion → ribs, fractures of.

Thrombo-angiitis, thrombo-arteritis → neurocirculatory disturbances, → thrombophlebitis.

Thrombophlebitis Prophylaxis in phlebitis: intracutaneous quaddles with 0.5 % lidocaine or 1 % procaine set within 2 cm from each other around the inflamed venous area; also, 5000–10 000 IU heparin sodium subcutaneously in a few places. If that is not enough, inject to and into the → (T) femoral, subclavian, or brachial artery (about four times, at intervals of 3 days). Procaine reduces vascular permeability, reduces inflammation, and eliminates prestasis, the slowing of the bloodstream that precedes thrombus formation. In the case of endangitis obliterans, precise local anesthesia can open the spastically contracted collateral vessels.

Treatment Procaine or lidocaine is injected intracutaneously (→ (T) quaddles) over the site of the → inflammation and its immediate neighborhood; also into and around the → (T) femoral artery and nerve, and (in severe cases where the patient's life may be at risk) into the lower → (T) sympathetic chain. Always apply a compression bandage. The interference-field potential of chronically pressure-sensitive hyperalgetic → varicose veins and periphlebitis, e.g., in arthrosis of the knee, should not be underestimated.

Post-thrombotic syndrome → lymphedema.

Thumb, disorders of → joints, disorders of. If → (T) quaddles around the joint and/or → (T) ring-block anesthesia given as segmental treatment do not yield results, we use a short, fine needle to inject 0.5–1 mL of procaine into the joint at the base of the thumb (carpometacarpal joint): → (T) joints.

Thyroid The hypothalamus-hypophysis-thyroid-system is a cybernetic regulation system with the purpose of regulating the supply of thyroid hormones. The thyroid is regulated by thyroliberin (TRH), which causes the secretion of thyrotropin from the hypophysis, and by the thyrotropic hormone of the adenohypophysis, the thyroid-stimulating hormone (TSH). The hypothalamus regulates many functions of the autonomic nervous system and the hypophysis regulates the endocrine metabolism. The growth and maturing of every cell in the body, mental and physical activity and performance, basic turnover, the whole of the body's metabolism, and hence also the energy, oxygen, temperature, fat, and water balance all depend on the action and interaction of the two thyroid hormones T3 and T4. In practice, therefore, and down to the last cell in the body, the thyroid acts both as gas pedal and brake with regard to all vital processes. This organ, which is minute in comparison with its importance, in order to be

capable of carrying out all these important functions, is so well supplied with blood that the body's entire blood supply passes through it every 90 minutes.

Compared with other organs, there is another sense in which the thyroid is special, for it acts as a kind of transformer between body and soul. In other words, it converts psychic reactions into organic changes. The maiden blushes at the sight of her lover, the young man's heart beats faster and his eyes sparkle when he sees his beloved. Good news can produce diarrhea, and mourning a death can cause constipation. Yet another person will be as if paralyzed by terror or shock. Our psyche cannot be shown by objective evidence to exist, but we can see its effects on the thyroid as if that were the instrument of the soul.

As regards the thyroid, diagnostic methods have been very substantially improved in recent years, mainly by using direct means. But these are not yet enough to show abnormal reactions of thyroid function in stress situations. Modern life is full of stress and this has produced a certain symptomatic picture that frequently recurs and may be regarded as the cross that the physician has to bear. One will search all the medical textbooks in vain for it. There, this disorder is either blandly classified as "goiter with associated autonomic symptoms" or will be found under one of the two passepartout diagnoses of "neurovegetative dystonia" or "psychovegetative syndrome." These terms are useful only for describing anything that does not fit too well into the straitjacket of an exact diagnosis and must therefore be shunted onto a siding of diagnostic and therapeutic inadequacy. My term for this clinical picture is "latent hyperthyroidism." It is difficult to pick up the scent of this disorder by conventional methods of investigation and examination, because the results look normal! Only a TRH test will show a greatly reduced or missing TSH secretion, which indicates a regulation disorder in the higher-level regulating system of the hypophysis. The clinical suspicion that there is a hyperfunction of the thyroid cannot be confirmed, and further investigations are then aimed well off the mark.

But our success in treating thyroid disorders by neural therapy enables us to prove that there is a → hormonal disturbance causing them, in which the controlling regulating function between psyche and neurovegetative system is inhibited or blocked. The transition is vague and ranges from → neurovegetative dystonia to hyperthyroidism. In these patients, every emotional stress, the menstrual period, a sudden change in the weather, and anything else of this kind can switch on the flow of hormones from the thyroid for too long and at an excessive rate. The sympathetic preponderance resulting from this causes a lowering of the organic and psychic irritation threshold and produces considerable disturbances in the autonomic functions involving the heart and circulation ("essential" hypertension), sleep, respiration, digestion etc. Since the physical sensation of being unwell sets off new emotional shock waves, the vicious circle is complete.

Whilst the parasympathetic system is mainly responsible for constructive building-up and maintenance functions at rest, the sympathetic system prepares the internal functions for emergency situations of fight or flight. If the sympathetic system is constantly dominant, the organism remains in a continuous state of readiness for an emergency and cannot relax properly. No other means can restore harmony between the sympathetic and parasympathetic systems so well as procaine treatment of the thyroid. One is always tempted to recommend autogenic training to this type of highly-strung patient who seems to be constantly at high voltage. But since they have difficulty in concentrating, they are often incapable of learning this type of "concentrated self-relaxation." With procaine treatment we can quickly achieve this kind of general relaxation and change of the patient's sensitivity.

In treating the thyroid we make no distinction between goiter and thyrotoxicosis, hypo- and hyperthyroidism. To the beginner it may seem absurd that two such diametrically opposite disturbances as hyper- and hypofunction should be treated with the same product and by identical means. But this is precisely where practical experience has shown quite clearly that procaine has a regulating effect irrespective of the point of departure. It restores the balance between the sympathetic and the parasympathetic systems. Anyone who doubts this will do well to prove this statement for him or herself by making his or her own tests. As long ago as the early 19th century, Alexander von Humboldt (1769–1859) knew that "nothing stimulates or inhibits on its own. The effect of the agent depends on the state of the object on which it acts."

In homeopathy, some women are considered the "pulsatilla-type." The patients are shy, fearful, tend to weep, are sensitive, even overly so, easily offended, hold in grief and sorrow, and will not reconcile easily. They need someone to lean on and want to be consoled particularly by their physician. There are some men that suffer from it but women make up 90 % of all latent hyperthyroid cases.

The physician relies more on observation than on laboratory results when he or she tries to recognize them. Laboratory findings stem from the sheltered environment of a clinic and do not tell us anything about thyroid responses when exposed to the stresses of daily life. If the slight stress of a visit to

the doctors office is enough to produce an amount of hormones that causes the anxious woman to wipe her clammy hands on her clothing before greeting the doctor, the doctor should know that he or she needs to treat the regulation disorder of her → (T) thyroid!

First, let us take a close look at the woman. Nervous and agitated she sits in front of us. Her eyes are moist, the pupils are large, and she is close to tears. Soon she will bring up the main symptom of this regulation disorder—anxiety! The thyroid has to always be considered if this word comes up while taking a case history. Angst and stress-based aggravation that occur more frequently due to the lowered psychological threshold are experienced with awareness and escalate. Particularly strong heart palpations are perceived as unpleasant and troublesome. Her tachycardic heart tends to suffer dysrhythmias including extrasystoles and paroxysmal tachycardia. She has difficulties falling asleep because of her constant internal restlessness and unrelenting thoughts. She tries to control her heartbeat by holding her breath. She responds to every innocuous irregularity with additional anxiety, unease, and psychological tension. This is followed by a choking sensation in the throat, which makes her feel as if she is suffocating. She rushes to open the window and gasps for air. She thinks that this could be a cardiac infarction. What will become of her husband and children? The patience of the sorely afflicted husband has worn thin by the ongoing complaints and he finally calls the emergency physician. The physician gives a valium injection to the woman. As he leaves he says "It is just nerves." This calms down the husband but not the patient; she does not make this up. Her husband yells at her, calls her a "hysterical shrew" (Greek *hystera* = uterus!), and threatens divorce. This makes it only worse. She always tries so hard and pulls herself together. Finally, her thyroid overflows and she starts crying. She feels the tension in her marriage and elsewhere. The tension increases and she does not see a way out of the dilemma.

But she has more to complain about and speaks of her hot flushes and the blood congestion in her head. This reminds us of → menopausal depression. Asked about her menstruation, she tells us that she suffers from oligomenorrhea and occasional amenorrhea and her lack of libido puts additional strain on her marriage. While she talks about her "psychosomatic problems," the skin on her neck, throat, and the neckline of her blouse have become red and the throat is swollen. She tells us that her hair has turned dry and she cannot style it anymore. She blamed that on increased perspiration first, but now she loses bunches of hair. Weather did not use to have an effect on her, now it makes her suffer. Before her menses, she feels particularly bad. At that time, the pressure in her head and the tinnitus culminate into a migraine. She does not look as attractive as she used to, has lost a lot of weight, and looks old and burned out. She feels fatigued, invalid, and depressed. She is a burden to herself and her family and thinks about ending her life.

When we examine her, we do not find much. Maybe we see slightly increased blood pressure, temperature, blood sugar, and pulse, which is no surprise in such an upset sympatheticotonic person. She reports that her thyroid and her heart had been thoroughly examined in the hospital but nothing was found. After that, she was sent to a psychotherapist who was not able to help her either. She was prescribed a number of psychopharmaceuticals and sedatives, cardiovascular and analeptic agents. She took them all and not much changed. Autogenic training did not do anything either.

Now what? Weight loss, hair loss, hyperhidrosis, amenorrhea etc., made us think of hyperthyroidism, but that had been excluded. We recorded: neurasthenia, hyperhidrosis, psychasthenia, insomnia, cardiac neurosis, globus sensation, anginose complaints, vasoneurosis, migraine, hair loss, premenopausal complaints, fatigue etc. In former times, I prescribed a long list of hormones, analeptic preparations, the latest psychopharmaceuticals, sedatives, cardiovascular agents and many more for those women. I did it in spite of the conviction that this woman "is not really sick." When I handed her the prescription I was dissatisfied and my "best wishes" were no satisfying medical effort either.

I do enjoy treating these patients since I have included injections into the → (T) thyroid in my treatment repertoire. Soon, they are more balanced and calm. Their environment notices that they socialize more and it is easier to get along with them. The pressure and lump sensation in the throat (globus sensation), which does not have to go hand in hand with the enlargement of the thyroid, disappears rapidly. Menstrual disorders can become regulated and weight and skin turgor improve. The women flourish and feel well and productive. They are grateful for our qualified and successful therapy. Our therapy does not involve risks and is by far less invasive and problematic with regard to organ functions than the administration of psychopharmaceutics or hormone treatment with anti-thyroid drugs.

Thyroid enlargement With a series of often up to 20 thyroid treatments at intervals of about a week or more, we can look on as the large majority of goiters first become softer and then smaller. Surgery can generally be obviated as a result. Patients suffer-

ing from latent hyperthyroidism are anxious people. Above all, they are afraid of thyroid surgery and receive little encouragement from those who have already undergone such surgery. Needle biopsy should have excluded a malignant condition before injecting into cold or warm nodules. The frequent recurrence of such disorders after thyroidectomy shows that a purely mechanical reduction in the size of the gland's substance is not always a solution that deals with the cause. As long as the neurohormonal system remains overstressed by an active interference field, the thyroid and its associated regulating systems cannot come to rest. This must be obvious to anyone who does not regard any organ as an isolated entity but who sees it in its cybernetic inter-relationships. Nor will he or she be surprised to find time and again that the thyroid is often slightly enlarged in patients presenting with acute or chronic disorders, such as polyarthritis, migraine, psychoses of all kinds, functional disorders, neurodystonia, pelvic disorders etc. These prove that the thyroid is also involved in the body's reaction and that it is overstressed. This is precisely the point at which we can intervene to help the regulating processes by our injections into the thyroid. Once hormonal control fails, several glands will be affected. In women, enlargement of the thyroid with or without hyperfunction occurs all too frequently after pregnancy (mostly after the second!) or after pelvic inflammatory disease. In many of these cases, an injection into the → (T) pelvic region can often take us a good step further, in others it will be best to treat the thyroid and → pelvis in combination.

Two thousand years ago, the ancient Romans did not know anything about glands and hormones. But they observed well and realized that the thyroid swells after the excitement of the wedding night with defloration and increased genital blood flow. Catull (84 BC–54 BC) writes in his epos of the *Marriage of Thetis and Peleus*: "But at the break of dawn, the nanny won't fit yesterday's cuff around the neck of her fosterling any longer." (Does that still apply?).

The veterinary surgeon, Kothbauer, has used "nervous" cows to test my reports about the option to affect the autonomic overexcitability and its consequences with procaine injections into the thyroid. He found that 3–5 days after injecting procaine, i.e., long after the anesthetic effect had worn off, a marked relaxing effect began to occur. In particular, there was a striking increase in milk production by cows treated in this way compared with untreated cows housed in the same cowshed. This improved state continued for several weeks. Since the oral administration of iodine also leads to increased milk production in cows, Kothbauer concluded that the procaine injections into the thyroid must have had a lasting effect on iodine metabolism. Tests of the iodine level in the blood serum of both humans and animals have in fact shown that this had returned to normal. In animals all psychological influence on the part of the therapist can be excluded as a therapeutic factor. Consequently, neural therapy caused the hormonal balance. This took place not only in the thyroid but also in the ovaries, adrenals, and the adenohypophysis, which increased milk production from the cows considerably through its prolactin secretion.

Case History 30: E. B., Thyroid Sufferer, Aged 50

E. B. from Dessau consulted me for bilateral arthrosis of the knees. When quaddle therapy did not afford any relief, I infiltrated two inguinal hernia scars, the strumectomy scar, and the thyroid. Two weeks later she was excited to tell me that her depression and "silly thoughts," which she had completely omitted, were altogether gone. Her knees, on the other hand, were still the same but that was bearable to her now. Her husband confirmed that after the strumectomy and the birth of their daughter 5 years later, she suffered from depression. Now, the obsessive idea was added that her daughter and the two grandchildren were not normal and she had to kill the latter at night in order to put them out of their misery. For the last 3 years, her husband had to lock away the hatchet, all knives, and sharp items. He had to lock the bedroom door before she finally was able to sleep with the help of barbiturates. These recurring thoughts disappeared after the treatment and she was able to resume a happy family life. It turned out that an interference field in the pelvic area caused her knee problems. This patient suffered from depression and obsessions that originated in an interference field of the thyroid and a strumectomy scar.

Thyrotoxicosis In Graves disease (Basedow disease, exophthalmic goiter), hormonal receptors are blocked by wrong signal substances in such a way that they can no longer function normally. The successes achieved by neural therapy show that it can often remove this type of blockage by repolarizing the cell membranes and normalizing cell function. See also → thyroid.

Tibia, inflammation of → periosteum.

Tic A tic is a "cry for blood uttered by the nerves" (Stender), which can be satisfied by injections to the → (T) afferent arteries, nerves, and the → (T) sympathetic chain and its → (T) ganglia.

Convulsive tic → eye disease, → spasm, facial, tic douloureux: → trigeminal neuralgia, tic, facial: → spasm, facial.

Tickbite → insect bites.

Tietze syndrome We treat the painful swelling of the rib cartilage at the sternal attachment (usually the second and third rib) and radiate sternocostal ligaments by injecting a local anesthetic in the swollen area and into the sternoclavicular articulation. See also → (T) joints.

Tinnitus → ears.

Toes Use local injections or → (T) ring-block anesthesia. Injections into the toes are painful, and it is therefore essential first to fix the foot; see intra-articular injections (→ (T) joints). See also → hallus vagus, → (T) nerves, → metatarsalgia, → tarsal-tunnel syndrome.

Tongue In the case of burning of the tongue and a disturbed sense of taste, various metals in the mouth (see Chapter 2, Section C, Part I under The Dental Interference Field: Teeth) should be removed and the tonsils tested for interference.

Treatment The → (T) lingual nerve supplies the anterior two-thirds of the tongue. Also → glossodynia; → (T) glossopharyngeal nerve, → (T) stellate or superior cervical ganglion.

Tonsillar abscess This heals rapidly or drains spontaneously following an injection into the → (T) stellate ganglion.

Tonsillectomy after-pain First aspirate, then inject 1 mL procaine to each surface scar immediately under the center of the suture line. Repeat the treatment if the pain recurs, possibly also a few drops to the top and bottom of the wounds. See also → tonsillitis, → (T) tonsils.

Tonsillitis The "prophylactic" administration of antibiotics and chemotherapeutic preparations is nowadays all too common. Unfortunately, as regards throat infections, this holds far more disadvantages than advantages. In suppressing antibody formation, conditions are created that favor relapse, the formation of peritonsillar abscesses and, above all, the establishment of interference fields. From a biological point of view, the traditional treatment consisting of a fever diet, hot packs, and laxatives is more sensible and preferable. In acute tonsillitis, an injection given intravenously (→ (T) intravenous procaine injections) or to the tonsillar poles (→ (T) tonsils) can reduce the → fever and restore body temperature to normal within half an hour, while making all the attendant symptoms disappear.

In chronic recurrent tonsillitis, repeated injections to the tonsillar poles (→ (T) tonsils) (preferably prophylactically, in spring and autumn) will prevent tonsillar inflammation and abscesses. In children, after treating hypertrophic and chronically infected tonsils in this way once or several times, we can see the same increase in appetite and general improvement in health that may follow enucleation of the tonsils. We are convinced that the treatment of diseased tonsils with procaine can make the majority of tonsillectomies superfluous. Tonsils and tonsillectomy scars are so often encountered as interference fields that our demand, to the effect that neural therapy should be used to treat tonsils, sore throats, scarlet fever, and diphtheria, though it may at first sight seem exaggerated, is shown to be perfectly justified. Injections into the tonsils are straightforward and can be easily learned by anyone. They are absolutely free from risk if the normal precautions described are taken. In the case of septic tonsils, in addition to the administration of antibiotics, the → (T) stellate ganglion should also be injected. See also → tonsillar abscess.

Lewit found that 92 % of all children with chronic tonsillitis also had blocked upper cervical joints, particularly in movement in the atlanto-occipital segment. Manual therapy or (less effective!) tonsillectomy improved the blockage. After manipulative treatment had been concluded, the tonsillitis healed completely and none of the children suffered a relapse. We also frequently find in our procaine therapy that there is an interactive relationship between a tonsillar interference field and the upper cervical spine.

Torticollis

1. *"Rheumatic" origin:* This is not a form of rheumatism but has mechanical causes. For example: articular constriction of the synovial villi in the small vertebral joints obstructing their gliding capacity.

   Therapy: Procaine should be injected intravenously (→ (T) intravenous procaine injections) and → (T)quaddles set over any hyperalgetic points found by palpation. Then probe in depth through the quaddles by advancing and withdrawing the needle and inject as near to or, if possible, right into the painful area; also to the periosteum of the cervical vertebrae. Always aspirate before every injection (blood, cerebrospinal fluid, lung)! Often it is possible to obtain enough freedom from pain merely by blocking the → (T) accessory nerve. Injections into the cervical and brachial plexus (→ (T) nerves [afferent]) are also recommended, in stubborn cases also to the → (T) stellate ganglion. If these fail to work, find the interference field.

2. *Spasmodic torticollis, neurogenic wryneck, torsion dystonia* (following encephalitis or brain damage in early childhood): Treatment as under (1), in addition to → (T) intravenous injections also inject under the → (T) scalp. Also inject into both attachments and origins of the sternocleidomastoid muscle, and especially and repeatedly to the stellate or even more effectively the superior → (T) cervical ganglion, also bilaterally, once or twice a week. See also → cervical syndrome, → osteochondrosis, → (T) cisternal procaine injection.

Toxemia of pregnancy → eclampsia.

Transfusion shock → shock.

Transverse lesion of the cord with paraplegia Try injections to the periosteum of the vertebra at the level of the spinal cord lesion (see Fig. 1.**19**, p. 76), also to the → (T) sympathetic chain at the corresponding level and, in low lesions, also → (T) epidural infiltration. Even simple → (T) quaddles over the spinal column and the adjacent musculature can provide relief.

Traumatic epilepsy → epilepsy.

Traumatic erysipelas → erysipelas.

Traumatic shock → shock.

Trigeminal neuralgia In our view, trigeminal neuralgia is due to defective insulation of the nerves and disturbed synaptic or gate-control function. As a result, the specific pain fibers are excited by even the most insignificant stimuli, such as slight contact, cold, heat, or muscle movement, to an extent that would normally occur only with very strong stimuli. It is therefore our task to raise the stimulus threshold back to its normal level and restore the disturbed nerve function to normal. We can do this by pinpointed injections, sometimes within the affected segment and sometimes from the site of an interference that is causing the disturbance.

First, all possible causes emanating from the orthodontic region must be eliminated by a dentist with a biologically oriented attitude. These causes can include occult caries, dental fillings that are either too deep or inadequately insulated, teeth subjected to excessive strain, cysts, the remains of roots, residual osteitic changes, foreign bodies etc. Excessive strain on the mandibular joints can also produce neuralgialike pain in the trigeminal region: see → neuralgia of the temporomandibular joint.

Therapy Procaine is injected intravenously (→ (T) intravenous procaine injections) and into the three → (T) nerve-exit points or the specific branch(es) involved. Thin needle, quick insertion, small amounts. At the sites of dental extractions, the alveolar process should be palpated and procaine injected under any pain points or scars that seem unduly tense. In the upper jaw, the → (T) palatine nerves can be anesthetized, in the lower jaw, the → (T) inferior alveolar nerve. Also give submucous injections under the oral mucosa where indicated by the patient, or inject into the posterior pharyngeal wall in the region of the adenoids (→ (T) pharyngeal tonsil). Try a → (T) nasal spray. An injection to (but not into!) the → (T) carotid or vertebral artery, or into and around the→ (T) temporal artery or into the → (T) thyroid can also help. If this is ineffective, we try the stellate, Gasserian (otic), pterygopalatine, or → (T) ciliary ganglion.

Frequently indicated → trigger points also occur adjacent to the alae nasi and in the angle formed by the masseter muscle and the zygomatic arch. It is obviously necessary to attack these with the same amount of precision as that required for any other point.

As in so many other cases, between 30–40 % of all trigeminal neuralgia is caused by an interference field! It is especially important to test all the teeth and subject them to comprehensive dental treatment. Even a false bite can turn into a neural cause of this disorder.

At the 13th Conference of the International Medical Association for Neural Therapy according to Huneke held at Freudenstadt in 1971, Schoeler published collected statistics on 639 cases of trigeminal neuralgia treated by 25 neural therapists. The patients included 410 women and 229 men, with ages ranging from 19–86 (average age 54). On average, five treatments were necessary and the mean post-treatment observation period was 7.5 months. Of the 639 patients treated:

- 220 (34 %) were completely cured (i.e., pain-free, no relapse);
- 235 (37 %) showed substantial improvement (i.e., less pain and at longer intervals, analgesics no longer required);
- 88 (14 %) were better (analgesics substantially reduced);
- 96 (15 %) unchanged.

In no fewer than 267 cases (42 %), an interference field was found to be the cause. If we then analyze the cases due to interference fields, we discover some interesting facts:

- scars 25 % (67);
- paranasal sinuses 4 % (11);
- teeth 23 % (63);

- herpes zoster 4 % (10);
- tonsils 22 % (59);
- spinal column (especially cervical spine) 4 % (10);
- pelvis 11 % (15);
- organs (especially ears and gallbladder) 6 % (15);
- prostate 1 % (3).

Of the 639 cases 121 had earlier undergone surgery, a large number of them three to six times, all in vain:

- 49 with peripheral nerve resections;
- 49 with destruction of the Gasserian (otic) ganglion;
- 23 with central neurosurgical operations.

If we then analyze these 121 patients who had undergone unsuccessful surgery and compare this with the success rate achieved by neural therapy according to Huneke, the following picture appears shown in Table 2.**1**:

Amongst the therapy-resistant cases, trigeminal neuralgia following herpes zoster involving the head was particularly heavily represented. We are led to the assumption that this virus infection produces nerve damage that remains irreversible for our therapy. The trigeminal ganglia are, of course, well-known to be reservoirs for the herpes type I virus.

The favorable figures of these statistics show that more restraint in resorting to surgery for dealing with trigeminal neuralgia would be appropriate, whilst skillful neural therapy deserves more widespread use. Further, they prove once again that those who had not undergone surgery responded better to local anesthetic therapy than those who had been so treated. Moreover, we are probably also justified in concluding that a large proportion of cases of neuralgia diagnosed as "idiopathic" or "essential" is in fact due to interference fields.

Case History 31: Auguste O., Aged 59

Auguste O., from Garmisch, came to me in 1970 with a trigeminus neuralgia of the first to third branch on the left side. In spite of intensive therapeutic attempts, she had suffered this condition for the past 26 years. When several peripheral neurectomies failed, her Gasserian (otic) ganglion was coagulated in 1960 and 1964 at the University of Heidelberg. After the second surgery she had ear discharge. Other than that, nothing had changed.

When segmental therapy did not produce results, I tested the pelvic area based on three deliveries listed in her health history. This treatment resulted in considerable improvement. After eight such treatments in 2 months and four injections in the following 2 months, the plagued woman was finally symptom-free for 6 weeks. During the next 6 months only seven more treatments were necessary. This was followed by another symptom-free 6 weeks. In 1972 she needed five and in 1973 she only needed one treatment of the pelvic area, which was effective for more than one year. After 26 years of suffering, it took altogether 29 treatments in 40 months to allow the patient to live symptom-free for prolonged periods of time. In this case, complete cure was anatomically impossible due to the intracranial cicatrization. Diagnosis: the condition of this patient had to be therapy-resistant for 26 years to treatment including medication, surgery, and segmental therapy because the origin was an interference field in the pelvic area.

Trigger points and zones The term "trigger point" is used to describe exceedingly tender points in the skin, mucosa, musculature, or in fasciae, from which pain can be produced by applying pressure. They can also be spontaneously tender. To us, they are important reactive points where stimulation and pain thresholds are considerably lowered. They can originate from injuries, neural or thermal stimulation, muscular exertion, or psychologically based muscle tension. This pain will often radiate to neighboring areas of the body and especially along functionally connected muscular chains. This can initiate the formation of new trigger points. In → neuralgia, especially in the zones supplied by the → (T) trigeminal and glossopharyngeal nerves, often the slightest contact, chewing, speech, or yawning can be enough to produce very severe pain.

Therapy Repeated anesthesia of these points is an important therapeutic measure. As the pain subsides, the muscle spasm relaxes. Local circulatory disturbances, with poor oxygenation of the tissues due to

Table 2.1 Statistics for treatment of trigeminal neuralgia in patients with previously unsuccessful surgery

Operation	Peripheral	Gasserian (Otic) Ganglion	Central Neurosurgery	Totals
Cured	16	14	6	36 = 30 %
Substantially better	20	13	7	40 = 33 %
Better	5	7	5	17 = 14 %
No change	8	15	5	28 = 23 %
Totals	49	49	23	121 = 100 %

reflex vasoconstrictor effects, are eliminated. This can in itself be enough to influence the course of an illness in a positive sense.

Trismus, lockjaw In spasm of the masticatory musculature due to reflex action, try injections bilaterally into the acupuncture points TB23 ("gate of the ear," in the dimple between tragus and the upper attachment of the external ear), infiltration of the masseter attachments to the cheekbone and to the upper edge of the mandible, together with injections to the → temporomandibular joints. If this fails to produce results, inject into the → (T) mandibular nerve (→ (T) Gasserian [otic] ganglion).

Trophic ulcer → neurocirculatory disturbances.

Tuberculosis → infectious diseases, → joints, disorders of, → larynx, → lungs, → peritoneal tuberculosis, → testes.

Tuberculosis, peritoneal → peritoneal tuberculosis.

Twitching of the eyelid, spasmodic → cillosis.

Tympanic plexus → neuralgia.

Typist's syndrome → tendovaginitis.

U

Ulcer Early injections around and infiltration under the ulcer will allow it to heal quickly. See also → varicose ulcer of the leg.

Ulcer, corneal → eye disease.

Ulcer (duodenal, gastric) → abdomen.

Ulcer of the foot, perforating → neurocirculatory disturbances, → tabes dorsalis.

Ulcer (neurotrophic, trophic) → neurocirculatory disturbances.

Ulcer, varicose → varicose ulcer of the leg.

Ulnar nerve, paralysis and paresthesia of → paralysis and paresthesia of the ulnar nerve.

Umbilicus In umbilical colics, first exclude worms as possible cause. Inject into the → (T) epigastrium and into the umbilicus to a depth of 10–20 mm, and set → (T) quaddles in a circle near the navel. The umbilicus is the first scar of every human being. Even when the patient does not present with or report an omphalitis, omphalorrhea, or delayed separation of the umbilical cord, we need to bear these in mind as indicating a possible interference field, particularly when there is a history of chronic disorders in the first year of life, such as eczema, bronchial asthma, and the like. The injection into the umbilical scar as far as between the plates of the rectus abdominis muscle is without risk and does not present any technical difficulties.

Upper lip, furuncles of → furuncles of the upper lip.

Upper respiratory tract, catarrh of → catarrh of the upper respiratory tract.

Ureteric disease → kidneys.

Urethritis In chronic unspecific urethritis, inject into the → (T) prostate; also → (T) epidural infiltration.

Urinary incontinence Mainly women suffer from involuntary urination when coughing, sneezing, and carrying heavy items. They often show additional signs of neurovegetative dysregulation such as demographism, hyperhidrosis, or autonomic → gynecological dysfunctions. If there are no neurological findings, one should try to improve the common neurovegetative disturbance in the regulation of the complicated enervation of the bladder with some neural-therapeutic injections. Surgery (descensus, prolapse, cystocele) rarely produces true improvement. See also → bladder, irritable, → cystitis, → enuresis nocturna, → pelvis, → prostate.

Urine, retention of Procaine injected intravenously (→ (T) intravenous procaine injections) stimulates diuresis and peristalsis, demonstrably increasing pressure within the bladder. → (T) Quaddles over the area of the bladder and sacrum act on the organ via the cutaneovisceral reflex zones. → (T) Epidural infiltration and injections into the → (T) sacral foramina or to the abdominal → (T) celiac ganglion are generally also effective. In cases of prostatic hypertrophy: → prostate, → anuria.

Urticaria → skin. Procaine is injected intravenously (→ (T) intravenous procaine injections), if necessary repeated at half-hourly to hourly intervals. If nettle rash occurs following serum injections or vaccinations, infiltrate procaine around and under the injection or vaccination. Chronic urticaria is almost always due to an interference field. For a year, the wife of a colleague was under continuous and massive treatment by an allergy specialist, who used every imaginable kind of preparation and desensitization measure, but without any success whatever. In accordance with the principle "extract the teeth, take tonsils and appendix out, and soon your patient will run about," a search had also been made to find a "focus." All this despite the fact that when her history was being taken she had stated clearly that these unpleasant symptoms had started immediately after a febrile abortion. It was therefore more than obvious that the first injection should be given into the pelvic region: lightning reaction! Now, 15 years later, she has not had any recurrence and has remained symptom-free.

In other cases, an injection into the reflex zone of the → (T) nose, i.e., into the anterior third of the

lower nasal concha, or a → (T) nasal spray may be adequate. In stubborn cases, also inject to the upper → (T) cervical ganglion of the cervical → (T) sympathetic chain.

Uterine disorders → pelvis.

Uterine bleeding disorders → pelvis.

Uterus → obstetrics, → pelvis.

V

Vaccinations, complications following → smallpox vaccinations, complications following.

Vaginal disorders → kraurosis vulvae, → pelvis, → pruritus, → vaginismus.

Vaginismus Primary vaginismus is a psychological disturbance. It can be overcome only if the physician can gain his or her patient's confidence. The vicious. circle of anxiety—spasm—pain—anxiety can be broken by attacking the pain. In most cases, intracutaneous and subcutaneous injections (→ (T) quaddles) all round the vaginal introitus will be all that is needed. The addition of hyaluridonase (kinetin) to the local anesthetic can make the infiltrated hymen distendable for hours. Once the anesthetic has taken effect, the patient should have her attention distracted and the entrance to the vagina carefully stretched. This helps to convince her that her vagina is distendable without producing spasm. In addition to injections into the → (T) thyroid, in order to reduce the level of autonomic hyperexcitability, the → (T) pudendal nerve may also be injected, and → (T) quaddles over the pubic crest, and the lower sacral and coccygeal regions and possibly → (T) epidural or → (T) presacral infiltrations may also be given. See also → pelvis.

Vaginitis → pelvis.

Varicophlebitis → thrombophlebitis, → varicose veins.

Varicose ulcer of the leg This ulcer is the product of a deep-seated nutritional disturbance of the tissues. Our task is therefore to improve the blood supply by eliminating the insufficiency of the terminal vessels and to stimulate the veins to play an active part once again in the return blood flow. We have to approach this from several different directions at the same time:

1. By active measures that act directly on the autonomic system, which carries such a crucial responsibility for the blood supply:
   a. Over clearly enlarged and inflamed → varicose veins we set → (T) quaddles about 10 mm apart. In addition, there should always be a quaddle set four fingers' breadths cranially from the medial malleolus on the medial border of the tibia. This is the point of intersection of three *yin* channels (KI8, LV5, SP6), which is needled or injected with procaine by all acupuncturists in circulatory disturbances of the lower abdomen and lower extremities and in connective-tissue disorders. A further specific point for use in connective-tissue weakness (SP5) lies distally of SP6 in the dimple palpable between the navicular bone and the tendon of the anterior tibial muscle.
   b. Deep infiltrations of 1–2 mL in the "coolie point" (BL58). This is located in the calf in the bifurcation between the heads of the gastrocnemius muscle and is generally pressure-sensitive.
   c. All → (T) scars in the segment must be treated at the same time.
   d. Injections to the root of the → (T) sciatic nerve or the sciatic plexus and to the branches of the sciatic nerve, e.g., the peroneal and saphenous nerves, possibly also → (T) presacral or → (T) epidural infiltrations (or alternately). Also:
   e. Intra- and para-arterially to the → (T) femoral artery and the femoral nerve lying laterally from it. Further:
   f. Local treatment of the ulcer: painful ulcers can be made pain-free by application of a gauze compress soaked in a 2 % pantocaine or 3–4 % lidocaine solution and allowed to remain in place for a few minutes. On each occasion, the exudate-covered surface must be scraped with a scalpel down to the healthy base of the wound. The constricting ring of connective tissue on the margin of the ulcer, which forms a mechanical barrier to the blood supply, is removed at the same time. Then remove all residues of ointment and scabs around the ulcer, especially scabs distally from it, and infiltrate around the ulcer from a number of points. If the neighborhood of the ulcer is much indurated, first loosen the tissue by infiltrating air under it and then inject procaine. This method is superior to surgical debridement of the ulcer; it is at least as effective, does not leave a scar that

can in turn become an interference field, and can be repeated at any time. I also have no hesitation about going directly into the ulcer and infiltrating 4–5 mL of procaine under it, together with about the same amount of air, in order to lift it from its base. This also enables us to reach the deeper-seated phlebitis, which forms an integral part of every varicose ulcer and can keep the circulation-inhibiting spasms going. Misgivings about this method are based on theoretical considerations and have proved unfounded in practice. No air embolism ensues if, before injecting air, care is taken to aspirate and if injections into major vessels are avoided. In any case, a small amount of air never does any harm. The procaine prevents infections and the transmission of pathogenic agents etc. (→ inflammation, → tetanus). Repeat after about a week.

2. Following this treatment, a compression bandage is applied. As a rule, this is a zinc ointment bandage extending from the toes to above the knee. This is intended to help reduce any pressure of the column of blood on the capillary zone and thus to reduce the existing capillary damage. No bed rest; the patient should walk! If possible, this bandage should be left in place for 8–10 days until the next treatment. If there is much purulent discharge from the ulcer, a window may be cut out above the wound. If so, the only measures permitted the patient are saline compresses (one tablespoon of common salt per liter of water). The patient must be forbidden to use any ointment or powder on the wound. A foam-rubber pad (according to Lohmann) over the window prevents the formation of local edema, which would delay the healing process. This form of selective polypragmatism pays dividends, even if it demands a certain amount of fortitude on the part of the patient, but he or she will normally be glad to supply this when they sees how quickly their leg improves with this treatment. The pain is promptly relieved, the wound rapidly becomes clean and visibly smaller. Such news spreads rapidly amongst those afflicted with varicose ulcers.

Richard has used the treatment recommended here, by infiltrating around and under the ulcer and injecting into the femoral artery under brief Epivan or Epontol anesthesia, and has succeeded in getting every ulcer treated in this way to heal completely, generally within 3–4 weeks. If this combined treatment does not produce a substantial improvement after three to five treatments, one will obviously yet again have to consider whether an interference field somewhere in the body might be preventing segmental treatment from being effective.

Varicose veins Hereditary or acquired connective-tissue weakness manifests itself most patently in the leg. In particular, recurrent → thrombophlebitis seems to favor the development of arthrotic changes in the → knee joint. The treatment of varicose veins by surgery or drugs is unsatisfactory. Even procaine treatment is worthwhile only if it is carried out consistently and over a lengthy period. Using the finest needle, strictly intracutaneous → (T) quaddles should be set over the largest of the inflamed venous nodes, in order to improve the blood supply in the skin, which is often as thin as tissue paper. The varicose veins gradually become smaller and seem to sink back down. The patient reports that the heaviness in their legs is disappearing. Because they can see and feel the results of the treatment, they are generally happy enough to continue with it, despite the fact that it can be somewhat painful. The medial edge of the tibia below the knee should also be palpated, since pressure-sensitive hyperalgetic points often form there in conjunction with varicose veins, and these should be infiltrated to their full extent.

It will be obvious that, in conjunction with compression bandages, this treatment also forms a useful prophylaxis against → varicose ulcer and acts as supporting treatment in dealing with an established ulcer.

Vascular occlusion In acute peripheral vascular occlusion, → (T) periarterial anesthesia of the sympathetic fibers, administered at several sites, will eliminate vascular spasm and relieve pain to a considerable extent for 4–6 hours. We also inject intra-arterially into vessels that do not lead to the brain. The treatment is repeated if the symptoms recur. As a rule, it is possible to restore the circulation after several treatments and stimulate the collateral vessels. Additional anesthesia of the → (T) nerves (afferent) and the → (T) sympathetic chain corresponding to the segment involved will make certain of this and accelerate the process.

Air embolism → (T) intravenous. Cerebral embolism → stroke.

Pulmonary embolism → intravenous injection to the homolateral (and possibly also the opposite) → (T) stellate ganglion, together with 2 mL distributed in the intercostal spaces over the affected pleura.

Vascular sclerosis → neurocirculatory disturbances.

Vasomotor rhinitis → nose.

Vasoneurosis → neurocirculatory disturbances.

Venous inflammation → thrombophlebitis.

Ventricular fibrillation → heart. Pre-operatively, procaine is given intravenously (→ (T) intravenous procaine injections) to prevent cardiac arrhythmia.

Verruca → warts.

Vertebragenic disorders → cervical syndrome, → joints, disorders of, → migraine, cervical, → osteochondrosis, → spine.

Vertebral artery compression syndrome In traumatic or degenerative changes in the cervical spine, the vertebral artery and its nerve can be irritated, notably when the head is moved suddenly (vertebrogenic radicular syndrome). This produces a sudden loss of function and irritative symptoms in the area supplied by the artery, e.g., vertigo, auditory disturbances, Ménière syndrome, nausea, occipital neuralgia, and, in severe cases, loss of consciousness and falling (→ cervical syndrome).

Treatment If there are variations in the internal diameter of the vertebral artery, chirotherapeutic measures are contraindicated! We inject to the → (T) stellate ganglion in which the vertebral nerve originates, to the carotid or directly to the → (T) vertebral artery, and bilaterally to the → (T) mastoid process.

Vertebral osteochondrosis → osteochondrosis.

Vertigo Vertigo can be an alarming sign. Consequently, before every treatment, precise diagnostic measures are mandatory. Dizziness is generally due to circulatory disturbances in the head. Our injections are therefore indicated, since they stimulate the blood supply.

Therapy In the case of cerebral circulatory disturbances, procaine is first injected intravenously (→ (T) intravenous procaine injections) and bilaterally under the → (T) scalp at the temporal and parietal level down to the periosteum. In severe cases, such injections are given all around the head at the level of the greatest circumference. Bilateral rows of → (T) quaddles are set along the spinous processes of the cervical spine. They affect the dermatovisceral reflex paths of the segments C2 and C3. We also use the osteovisceral pathways by injecting around the temporal bone. This is done with injections to the → (T) mastoid process, into the notch between tragus and helix of the ear and upper margin of the concha. The injections reach to (not under!) the periosteum. In addition, injections are given in the → (T) vertebral artery and, if sensitive to pressure, the transverse processes of the atlas reached from the notch behind the ear lobe, or to the second cervical spinous process, which is injected vertically to its pathway in caudal direction. The great auricular nerve should be anesthetized in cases of otogenic vertigo. The latter surfaces inferior to the mastoid, at the posterior edge about the mid-point of the sternocleidomastoid muscle. Palpation often shows it to be a hyperalgesic point. If injections into the → (T) stellate or superior cervical ganglion fail, search for the interference field.

Vertigo, labyrinthine → ears, → vertebral artery compression syndrome, → concussion, cerebral, → neurodystonia.

Vesicular eruptions → skin.

Virus disease → infections.

Vitreous hemorrhage → eye disease.

Vomiting in pregnancy, uncontrollable → hyperemesis gravidarum.

Vomiting, post-operative Inject procaine intravenously (→ (T) intravenous procaine injections) and into the → (T) epigastrium.

Vulvar disorders → pelvis.

Vulvar kraurosis → kraurosis vulvae.

W

Warts In the treatment of warts, suggestion will also help, i.e., anything that impresses the patient and which he or she can firmly believe! It never ceases to surprise me that faith can get rid of obvious organic changes so quickly. A simple, quick, and safe method is to use a fine needle to penetrate the surface of the wart down to its root and to infiltrate procaine under it there. It is essential to add with conviction that the root is now being killed off and that the wart will dry out within a few days. The patient must be able to satisfy him or herself after the injections that he or she now no longer feels the dead wart and that therefore the injection has "hit the right spot."

Wasp stings → insect bites.

Wear and tear disorders See Chapter 3, Rejuvenation through Procaine?, Section C, Part I, → geriatric disorders, → joints, etc.

Weather susceptibility This sign of increased irritability of the neurovegetative system indicates that it is already under stress and cannot maintain its equilibrium when asked to cope with the additional burden of a change in the weather. As a first-aid measure to reduce sensitivity and relax the autonomic nervous system, and for its longer-term reversant effect irrespective of the initial autonomic state, we inject a suitable anesthetic preparation as used in neural therapy intravenously (→ (T) intravenous procaine injections) and into the → (T) thyroid. If the patient also complains of a sensation of pressure in the head, we also inject under the → (T) scalp. For tightness across the chest we set → (T) quaddles next to the sternum. But in many cases, search for the interference field responsible! See also → foehn disease, → neurodystonia.

Whiplash syndrome In chain collisions involving motor vehicles, the cervical spine may be hyperextended, with consequent pain in the segment. In these cases, hyperalgetic points are always present in the neck and shoulder region, and in addition to manipulative therapy these should be anesthetized. If this does not produce the required effect, an injection to the → (T) tonsils will often produce freedom from symptoms. This disease picture requires the consideration of psychogenic complaints possibly related to insurance reimbursement. See also → cervical syndrome.

Whitlow → paronychia.

Whooping cough Procaine is given intravenously (→ (T) intravenous procaine injections). In small children, the local anesthetic may be injected para-arterially in the antecubital fossa, and → (T) quaddles set adjacent to the sternum and the thoracic vertebral column, preferably with a Dermo-jet. As long ago as 1906, Spiess observed that whooping-cough paroxysms stopped following an anesthetic of the → (T) superior laryngeal nerve.

Womb → obstetrics, → pelvis.

Writer's cramp In addition to psychotherapy, injections should be given into the brachial plexus (→ (T) nerves [afferent]) and the peripheral hyperalgetic points. The median nerve can be compromised in the elbow bend where it passes through the pronator teres muscle. This can cause or promote writer's cramp.

Wryneck, muscular In any conservative treatment, first priority must be given to stretching the sternoclydomastoid muscle following anesthesia of the → (T) accessory nerve and generous → (T) intramuscular procaine infiltration. (Care must be taken to avoid intravascular injection!) See also → torticollis.

X

Xiphoidalgia Pressing pain at the inferior end of the sternum that extends into the neighboring areas. It can lead to abdominal syndromes, pseudo angina pectoris episodes, and shortness of breath. The condition is created by constant muscle pull of the pectoralis major and the shoulder muscles with unilateral physical activity.

Therapy Setting → (T) quaddles above the pressure-sensitive trigger points is followed by → (T) preperiosteal infiltrations.

Z

Zoster neuralgia → herpes zoster, → neuralgia.

Part III

The Techniques of Neural Therapy

Introduction

Facts to Remember

1. Neural therapy according to Huneke is a regulating therapy, i.e. a holistic therapy. The healing stimulus produced by means of a correctly placed neural-therapeutic substance produces a response from the whole of the neurovegetative system whose pathways are those taken by both illness and recovery.
2. Segmental therapy according to Huneke refers to the selective use of procaine or lidocaine in the area of the disease process. Always examine first, then test! The improvement achieved with segmental treatment increases with repetition up to complete cure. If segmental treatment fails to produce an improvement, look for the interference field.
3. Any chronic ailment can be due to an interference field.
4. Any part of the body can become an interference field.
5. The injection of procaine or lidocaine, repeated as necessary, into the responsible interference field will cure the disorder caused by it, as far as this is anatomically still possible, by means of a lightning reaction (Huneke phenomenon).
6. The conditions for a lightning reaction are:
   a. All disturbances remote-controlled from the interference field must disappear completely, as far as this is anatomically still possible, at the moment of the injection.
   b. Freedom from all symptoms must continue for at least 20 hours (8 hours in the case of teeth).
   c. If the disorder recurs, the injection(s) must be repeated, and the period of freedom from symptoms must clearly increase with every subsequent treatment. A Huneke phenomenon has been produced only if this criterion has been met.
7. If injection into the segment produces no substantial improvement, or an injection into a suspected interference field does not produce a 100 % lightning reaction, further injections at these sites are pointless.
8. Always try simple injections with small quantities of local anesthetic first, with few but well-placed injections. Injections into the sympathetic chain and the ganglia are our last resort. A doctor who wants to help his or her patient must also be familiar with these. Do not stop treatment until you have tried everything.
9. All suspect teeth must be tested in a single session, similarly all scars. All scars in the same segment must always be injected as part of any segmental treatment.
10. NOTE: Intra-arterial injections into a vessel leading to the brain or into the subarachnoid space can have serious consequences. Always protect your patient and yourself by prior aspiration.

Symbols Used in the Text

→ denotes that the key word following this sign is listed in the Alphabetical List of Conditions and Indications in Part II;

→ (T) denotes the key word following this sign is listed in alphabetical order in Part III, Techniques, where the technique for the injection may be found.

About the Techniques of Neural Therapy

Throw your heart across the hurdle and jump after it!
Equestrian proverb

The Huneke therapy offers many new therapeutic options that can improve the success of every practice. In order to take advantage of these options, one needs to master this therapy and learn how to apply the proper techniques in each individual situation without creating a general formula for the approach. This is not possible without some theoretical foundation. F. Huneke called his first book *Krankheit und Heilung anders gesehen* (*Disease and Cure—a Different View*); its new approach to pathogenesis and therapy needs to be adapted. Practicing neural therapy without taking a thorough case history and its analysis is half-hearted. We need the cooperation of the patient. Thus, a good relationship with the patient, thorough inspection, and particularly palpation, can complement the regular examination and help to find the clues needed for correct treatment. As students, we considered anatomy a boring and sometimes unnecessary exercise. Now it proves extremely useful when we have to familiarize ourselves

with the location of nerves and vessels and the functions of the area that requires treatment. Every medical intervention contains the risk of failure, complications, and side-effects. They have to be recognized and eliminated before the beginning of treatment.

The new techniques have to be studied. Before picking up a syringe, the location, direction, and depth of insertion as well as other aspects of treatment have to be clarified. Every beginning is difficult but this is worth the effort. Every practitioner who is convinced of the effectiveness of this healing art should follow the equestrian proverb stated above. He or she should follow their heart and overcome the obstacles. The obstacles are a combination of the psychological poison, which is fear, the hubris to trust one's own abilities, and the weight of laziness and habits. With consideration, necessary caution, and courage, the physician should start out with simple injections. The best equestrian begins with small hurdles. I remember my first challenging injection well. I dared the attempt after a sleepless night and felt my heart pound in my chest while I was holding my breath. I remember my initial hesitation and my thoughts of giving up after the desired miracles did not occur immediately. Because there was no textbook available to me then, I decided to write one. Success comes with experience and one learns how to project the sensitivity for tissues onto the tip of the needle.

I need to caution the daredevils, because they are in danger of violating the "Do no harm!" rule. We cannot harm the patient who comes to us with trust. We always need to apply our measures thoughtfully, adequately, and when necessary. Routine may never silence or replace the proper caution.

The hesitant practitioners need to remind themselves why they became physicians—most likely to alleviate suffering. What if these injections are necessary to obtain this goal? The true physician will never avoid taking a chance for his or her own protection! "*Taking a chance is the bow-wave to success*" (Amery); recklessness is the same for failure. If this does not provide the required courage, they should at least educate themselves and refer to a capable neural therapist. I am always agitated by the ignorant statement that some of the injections that are listed here should only be performed by a specialist or an "experienced" neural therapist. How does one obtain experience? One must collect experience. This implies that one has to begin somewhere and sometime, which is the only way to gather experience. One has to work for it and cannot avoid difficulties or become discouraged by them. This is the only way to become a successful, experienced neural therapist.

1 Materials

A good physician can do more good
with a damp towel than a bad one
with a whole chemist's shop.
Schweninger (Bismarck's personal physician)

a) Syringes

Only close-fitting syringes must be used, and strong enough to stand up to considerable pressure. These should be absolutely sterile, carefully stored, and maintained in good condition, in accordance with standard practice. Disposable syringes are preferred. The following is a list of the different types of syringes that may be used by the neural therapist:

1. *2 mL record syringes:* These are handy and easier to guide than bigger syringes, which also tend to tempt one all too easily to use unnecessarily large quantities. Disposable syringes have the disadvantage that due to their lightness they fail to give as clear a feeling of the needle position in the tissue as do the heavier syringes made of glass and metal.
2. *5 mL record syringes:* Use only for injections where larger quantities are required.
3. *Cartridge syringes:* With longer and shorter needles for use in injections in the orthodontal area and for hard scars. Also very suitable for our purposes are all-glass syringes with the Luer-Lok attachment, and the three-ring syringe with the Recofix attachment available in 2 mL and 5 mL sizes.
4. *The Dermo-Jet:* Akra, a firm in Pau (France), has put a device called Dermo-Jet on the market. This injects the liquid under the skin almost painlessly, at high pressure and supersonic speed. It can be used for setting quaddles, through which one can then pass infiltrations at greater depth (e.g., into the sympathetic chain). The patient is unaware of what is being done and undesirable defensive movements are avoided. This instrument has proved useful particularly for children and nervous adult patients when large numbers of quaddles have to be set (alopecia, asthma, enuresis, pertussis). With this device it is possible to win over even the most injection-shy patient for neural therapy. A special attachment is also available for anesthetizing the injection sites for what is normally a somewhat painful dental test and thus makes this important investigation less unpleasant for both patient and doctor.

There are four different models of the Dermo-Jet. For example, the Dermo-Jet Polymedical is a new improved model and has "Tip Jet" attachments, which are easily exchangeable and can be sterilized at 180 °C and above, improving the protection against possible contamination through antigens. It is recommended that some of these attachments should be available in every practice.

The use of the Dermo-Jet should be limited to children and overly fearful patients. When looked at microscopically, there is a considerable difference between quaddles that are set with an injection needle and those set with a Dermo-Jet. When set with the proper technique, the quaddles set with injection needles sit intracutaneously, which is directly subepithelial in the corium. Only a small portion of the Dermo-Jet quaddle is located in the corium. Due to the application of high pressure, the larger portion of the fluid reaches the subcutaneal area where it is dispersed. The Dermo-Jet can cause deeper tissue damage and microinjuries with increased bleeding. The microscope shows that the tip of an injection needle appears rather dull and arterioles can move out of its way, but they can be torn by the Dermo-Jet.

b) Needles Used in Injections

Apart from size 1, 2, 12, 14, 16, and 18 needles, which are probably standard equipment in any surgery, we also require 80 mm, 100 mm and 120 mm-long needles, with a thickness of 0.8–1 mm. Also recommended are 0.5 × 42 mm dental cannulas. For injection into the tonsils, the needle should have a short bevel. Disposable syringes are also available, with needles in all the lengths and thicknesses we require. In addition, there should also be a needle suitable for lumbar punctures, with a locking stilette.

All the repeatedly used needles must be sharp and should therefore be replaced from time to time. Any needle whose point is bent over into a barb must be thrown away at once. When striking bone, the point of the needle may be bent over and form a barb, which

Table 3.1 Needle size equivalents

Size No.	Size (mm)	Size (in)
1	0.90 × 40	20 G × 1-½
	0.90 × 120	20 G × 4-⅝
	0.80 × 80	21 G × 3-⅛
12	0.70 × 30	22 G × 1-¼
	0.50 × 21	25 G × 13/16
18	0.45 × 23	26 G × 15/16

can tear tissue when it is withdrawn or if it is used again. There have been reports of cases where nerve fibers have been damaged as a result of this. Since needles may break off where they have been soldered or attached to the adapter in some other way, they should never be pushed in "to the hilt." Where deeper penetration is necessary, it is far better to choose a longer needle beforehand. For beginners, Strumann's tonsil test needle is recommended, which is impossible to push in too far. For intravaginal injections, such as paracervical injections to Frankenhaeuser's ganglia or to the pudendal nerve, the PP needle made by Woelm Pharma, Germany, can be recommended. Table 3.1 provides a list of needle size equivalents.

c) General Equipment Required by the Neural Therapist

1. a neural-therapeutic product containing 1–2 % procaine, or 0.5–1 % Xylocaine or lidocaine (mepivacaine or prilocaine) solution for cases of procaine allergy;
2. Koch's old tuberculin or Cutivaccine Paul-Novum for Ponndorf's vaccinations;
3. vaccination fork, lancet, or needle, or ampule file, for Ponndorf's vaccinations;
4. vaporizer for nasal spray and cotton swabs;
5. instrument sterilizer;
6. an examination couch that can be adapted for gynecological use, a chair with a headrest, good lighting;
7. tourniquet for intravenous injections;
8. reflex hammer, brush, needle, possibly a dressmaker's tracing wheel, for testing reflexes and sensation;
9. grease pencil or felt pen for marking the skin;
10. surgical or disposable gloves;
11. bony skull and topographic atlas, for orientation prior to difficult injections;
12. oral spatula and pencil torch for treating the buccal cavity;
13. auriscope and nasal speculum;
14. test equipment for measuring skin resistance and finding acupuncture points (e.g., Svesa neural pen, by SVESA, Munich, Germany) and electrical skin test equipment (e.g., Mela Testator, by Mela Medical Ltd., Munich, Germany).

d) Accident and Emergency Equipment

Accidents can always happen, and the general practitioner must also be able to deal with these and have at least the minimum of equipment within easy reach and always ready for use. For this I suggest:

1. oxygen flask with pressure-reducing valve, Ambu artificial-respiration bag with face mask, Ambu Inc., USA;
2. pharyngeal and endotracheal tube, laryngoscope, tongue forceps, possibly also intubation equipment, electrocardiograph, defibrillator;
3. needles for intravenous therapy, preferably a self-retaining needle, ampoule file;
4. drugs in ampoules as follows:
   a. corticosteroids, such as methyl prednisolone, in doses of 50 mg, 250 mg, and 1000 mg;
   b. vasoconstrictors, such as arterenol, Effortil, Novadral, Sympatol (but on no account analeptics such as Cardiazol, Coramin, Cormed!), plus 0.1 % adrenalin;
   c. plasma substitute, such as Rheomacrodex, with infusion equipment;
   d. for dealing with convulsions: valium, barbiturates such as Pentothal; only if artificial respiration is assured, relaxants such as Succinyl-Asta, Lysthenon;
   e. antihistamines, such as Antistin, Synpen, Tavegil;
   f. Alupent, 10 % calcium glyconate.

In essence, this is all we need by way of materials in order to practice neural therapy according to Huneke. Thus, there is no danger in our method that we may encounter everywhere else in medicine, of becoming dominated by our equipment. Quite the contrary! Neural therapy is a genuine part of the art of healing, in which creative medicine is fortunately still the most important element and the tools take second place. It is also a very young art, in which there is still a great deal of new territory to conquer. Naturally, we demand thorough general medical training as an essential basis and require every practitioner to make a searching preliminary examination of every patient, to exclude certain specific processes, together with properly responsible conduct at all times.

2 The Question of Skin Disinfection

We still learn more from life
than from our teachers.
E. von Bergmann

Let me season what follows with an anecdote from my personal experience, in order to make what I have to say more palatable. As we know, even medicine is subject to fashions. At the start of the sulfonamide era, many a disciple of Aesculapius hastened to prove in well-founded scientific treatises that Prontosil worked genuine miracle cures in almost any internal and medical surgical disorders. Only a handful of doctors remained objective and adopted a wait-and-see attitude. Then it was Prontosil, yesterday it was penicillin, today it is corticosteroids, and tomorrow something else will be hailed as the wonder drug. I have no objection to progress. But the enthusiasm with which medicine greets each little step forward, with excessive praise and exaggerated expectations, and then has to backtrack, does tend to become just a little embarrassing after a while.

As a young student I had the good fortune of being allowed to watch Kulenkampff at Zwickau during an operation. In the middle of it, the master pulled off his gloves, threw them on the floor and went with bare hands into the abdominal cavity, so that he might be better able to feel something or other in there. I was speechless with surprise and my aseptic conscience was appalled. "Anything the matter with you?" he growled at me, when I finally and audibly caught my breath again. My carefully phrased objection received the grumbling reply: "My young friend, remember that you can defecate (though he used a shorter and more profane term) into the abdominal cavity, you may spit into the thoracic cavity without fear of retribution, but you must not even peep into the knee joint!"

As he was suturing the incision, I asked him whether he did not want to pour 50 mL of Prontosil solution into the abdominal cavity, as I had seen done elsewhere. His laughing reply was, at that time, something of a heresy, but today it seems wise: "No, why should I want to cover damaged and injured tissue with red dye as well?"

This experience came to mind in 1951, when I was able for the first time to watch F. Huneke in his practice in Duesseldorf, trying to steal with my eyes as much as I could for my own practice. I experienced the same slight shock when I found that he never disinfected the patient's skin before giving his numerous injections. His followers have adopted his approach. Millions of injections have shown that infections and injection abscesses hardly ever result. A survey produced only eight reports of infections in 35 000 000 injections. In some of these the cause lay in a therapy using corticosteroids or high-dosage regulation-blocking agents, which had substantially reduced the body's defensive capabilities. In others we regard the resulting abscess as exacerbation of an old sealed-off infection and as a healing reaction.

How does this come about? Is this to be interpreted to suggest that aseptic procedures are to be declared superfluous? There is no question of that, and for the benefit of critics who are not well-disposed to neural therapy let me emphasize that our syringes and needles must, of course, be sterile. Our experience with procaine has simply taught us to regard infection, and toxic and allergic reactions, from a new viewpoint. We explain the fact that even after injections under the scalp and into the oral mucosa no infection occurs, first of all by suggesting that the chemical and mechanical irritation produced by disinfecting the skin is perfectly capable of stirring the bacteria from a state of rest and making them virulent.

And then, of course, we are injecting procaine. As long ago as 1906, Spiess noted that anesthesia suppresses any inflammation. We see danger not in the pathogenic agents but in the nerve irritation (depolarization) they cause. But we can reverse this with our anesthetic preparations, using them to stop bacterial and virus attack and proliferation, and thus preventing infection. If we infiltrate procaine around a fresh snakebite, the venom can no longer act on the organism. This is explained first by the fact that the anesthetic breaks the conductivity of the nerve fibers. Thus, the nerves can no longer conduct the irritative stimuli to the nerve centers. But further, procaine is also capable of recharging the cell membranes damaged by the irritation and of restoring their normal electrical potential. By this means, the production of toxic stimuli is blocked, which would otherwise cause the center to respond with panicky, excessive, and therefore dangerous reactions. In tetanus, rabies, poliomyelitis, and many other

diseases, we need to imagine similar processes taking place, reminding us of the interference-field theory and of the possibility available to us of eliminating the pathogenic nerve irritation with procaine. The picture is rounded out if in this connection we remember that serum sickness can be stopped by anesthetizing the serum injection site (Muschaweck).

Far more important than all theory, however, is the fact that, whether we like it or not, that is the way it is. Obviously, no one can be prevented from continuing to carry out the traditional, ritual acts of ablution and of disinfecting the patient's skin before injecting procaine. In certain circumstances, as, for example, before deep injections in the perineal region and near the anus, we also disinfect first. Similarly, for injections into the joints and the subarachnoid space and ventricles, the same sort of asepsis and antiseptic precautions must govern our actions as for major surgery! The same applies to seriously ill patients before parenteral treatment and to patients who are treated with high doses of corticosteroids. As has been stated, in return we need have no misgivings about being somewhat less punctilious in all other cases.

T. C. Dann, in an article published in the *Lancet*, took the view that the standard few seconds' routine skin disinfection before an injection is totally useless. At best, no more than about 80% of all bacteria are killed thereby. He and his colleagues had been giving injections for 6 years without prior disinfection, without ever finding any harmful side-effects result. They disinfected the skin only in above-mentioned exceptional cases. But in all such cases the skin is thoroughly cleansed for at least 2 (preferably 5) minutes with iodine, alcohol, or hexachlorophene. In 1978, Felig, in the *Lancet*, went so far as to describe the business of disinfecting the skin before injections as an "unnecessary ritual act." In diabetics, where the risk of infection is substantially greater, 1700 injections were given without any prior disinfection of the skin around the injection site; not a single case of local or general infection resulted.

3 Procaine (Novocaine), "King of Medicines"

My hobby? Impletol, of course!
F. Huneke to a reporter

Novocaine is the registered trade name owned by Hoechst Pharmaceuticals for the p-amino-benzoyl diethyl-aminoethanol hydrochloride discovered in 1905 by Einhorn. Its generic name is procaine. In earlier German and Soviet literature we generally find the name of Novocaine used, whilst British and American authors refer to procaine, the French to scurocaine.

Procaine is thus an alcohol ester of p-aminobenzoic acid (PAB). It is hydrolytically broken down and thus detoxified via a serum enzyme, plasmacholinesterase, which occurs everywhere in the body tissues. This process takes from 20 to 40 minutes and produces two antihistamine components of interest: PAB and diethyl-aminoethanol. In the process of being broken down it is metabolized so thoroughly that only a small part (approximately 30 %) of it needs to be detoxified in the liver and only 2 % is eliminated unchanged via the kidneys. For this reason alone it is to be preferred for therapeutic purposes to a large number of more recent neural-therapeutic products based on an amide structure, such as Xylocaine, Scandicaine, Hostacaine etc., which need to be almost completely detoxified in the liver! Liver disease can lead to a reduction of the serum cholinesterase, because of which procaine will be metabolized more slowly. Other products such as butazolidine, chloramphenicol, and sulfonamides can delay detoxification. At this point, reference should also be made to the very rare congenital cholinesterase deficiency, which renders the patient incapable of metabolizing procaine.

Apart from the neural-therapeutic action developed by the intact procaine molecule in pathologically changed tissue, there is also the effect of its breakdown products. PAB (vitamin HI) is regarded as one of the organism's enzyme-building blocks. It acts as an intermediate stage in the formation of folic acid and of the citrovorum factor, which transmits the carbon-1 fragments in intermediate metabolism. PAB is probably also the main active agent against pathological sclerosing and hardening of the tissues. Diethyl-aminoethanol is a vasodilator substance that acts on the circulation and lowers blood pressure. Its spasmolytic effect on tonically constricted vessels and its influence on the neurovegetative state in sympathetic and parasympathetic irritation has been proved. In addition, a mildly stimulant effect on the central nervous system and psyche is also ascribed to it. It stimulates hair growth and sometimes restores youthful color to gray hair.

Procaine blocks cholinesterase, inhibits the formation of acetylcholine and the sensitivity to stimuli of the peripheral choline receptors. It suppresses histamine formation. As a beta-receptor blocker it eliminates the physiological and pathological reactions caused by stress and sympathicomimetics. It lowers the level of catecholamines in the blood (epinephrine, norepinephrine, dopamine).

For procaine and the other anesthetics, a number of specific pharmacological effects have been proved, all of which are desirable from our point of view. According to these studies:

1. It acts to restore neurovegetative equilibrium, i.e., it can act either as a stimulant, increasing tonicity, or as a relaxant to reduce tonicity, depending on the patient's initial state.
2. It acts to relieve pain. Here, in addition to its central and peripheral analgesic effect, there is also an antipyretic, anti-allergic, and spasmolytic element. As the pain disappears, the reactive inflammation also vanishes. By eliminating pain receptors the pain threshold is raised. When the injections are placed correctly, this effect lasts longer than the anesthetic effect, which indicates a decrease of pathogenic feedback. This suggests that the repolarization of the cell membrane during the anesthesia-hyperpolarization, with subsequent membrane stabilization, has a positive effect on the regulation mechanisms.
3. Its effect on the nervous system is made up of its ability to act simultaneously on the peripheral, the autonomic, and on the central nervous systems. It alters the functional state of the nervous system by reducing its lability, thus making it less sensitive to harmful stimuli. It is thus in a position to eliminate the state of shock of different origins and degrees of severity. If used correctly locally, it blocks pathogenic reflexes and reactivates the previously blocked neurovegetative system with its spontaneous healing capability.
4. It develops a therapeutic effect on all three components of the blood supply, i.e., the heart, the vascu-

lar system, and the blood. It has a regulating effect on the blood supply, is anti-allergic and a vasodilator, and reduces the permeability of the vascular walls:

a. Around the heart it inhibits the stimulus formation and conduction, and acts anti-arrhythmically. It has an oxygen-conserving effect on the heart muscle.
b. Microcirculation improves with the opening of arteriovenous anastomoses. Edema can drain and inflammations improve. In animal testing, edema was prevented when paws were treated with procaine before compressing them.
c. Animal testing proved the antihistamine effects of procaine, particularly by affecting the acute serum shock and suppression of the Shwartzman reaction. The stimulation of sensitive fibers causes histamine secretion, which stimulates more receptors. The antidromic reflex causes further histamine secretion. This lasts for a short while because the secretion is limited. Initially, sympathicus stimulation causes a spasm of the arterioles, which turns into pathological vasodilation with edema formation, vascular bleeding, intense pain with limited mobility, and muscle dysfunction. The sealing effect of procaine on the capillary walls begins quickly, reaches its peak after 1 hour, and lasts for up to 4 hours. In animal testing using procaine, the Bezold-Jarisch reflex of the induced collapse (loss of blood pressure, slowing down of pulse and respiration) can be prevented.

5. It also acts on the smooth musculature. So, for example, it sensitizes the uterus with regard to the hormone of the posterior lobe of the pituitary.
6. It has a substantial influence on the formation and secretion of hormones and enzymes.
7. It stimulates diuresis.
8. According to Uri, it also acts "directly on those parts of the brain which are associated with the transformation of stimuli into sensations."
9. It regularly and quite noticeably improves the patient's general condition. This means that a whole series of interrelated and interactive functions and regulating systems are reactivated, of which, however, we are able to find only a limited amount of objective evidence. The altering and balancing effects on the autonomic system and the regulation of sensitivity and trophism seem to produce positive results that include the psychological condition. Since the performance of organs and tissues is dependent on the blood supply and thus on the supply of oxygen and nourishment, and on the removal of the waste products resulting from metabolic processes, there is an increase in performance either directly locally at the treatment site or indirectly by the elimination of interference fields. This is enough to explain a large number of successful cures. It has also been proved that procaine has an oxygen-economizing effect in living tissue.

   The activating effect produced on non-specific defense mechanisms by procaine injections (subcutaneous and intramuscular, less clearly in the case of those given intravenously) has been proved by Joachimovits. He showed that the repolarizing action of procaine is regularly followed by a reaction upon the basic tissues, by demonstrating that an initial disintegration of leukocytes in the capillary region points to the liberation of certain enzymes, followed by an increase in the number of monocytes, histiocytes, and mast cells, which are so important for the body's spontaneous defenses. Some quaddles on top of the spleen (T8–T9) stimulate the organ of the immune system that is responsible for blood storage and result in direct improvement of the body's defense mechanism.
10. Of crucial importance is the direct influence of procaine on the vital functions of the cell. When a nerve receives a stimulus, the bioelectrical cell potential is reduced, the selective permeability of the cell membrane is altered, the balance of sodium, potassium, and hydrogen ions is disturbed and cell metabolism, including cellular respiration, which is so important for maintaining the electrical potential, is inhibited.

    According to Fleckenstein, procaine also has a regulating function in these processes. It seals the cell membrane, protects it against electrostatic depolarization, and enables the partly discharged cell to recharge its physiological potential again. Procaine, according to Pischinger, intervenes as oxydizing principle in the process of cellular respiration, as a substance acting on the cell membrane and as inductor of the bioelectrical potential. With this new supply of energy to the basic tissues, previously inhibited autonomic functions are once again set in motion. In addition to reactivating the tissue and cell potential, the oxygen balance and other functions such as the mineral, water, leukocyte and ion balance etc., are also reactivated. As a result, the cell returns to being a functioning unit again. As eutonia is achieved at the autonomic and reflex stimulation levels, the stimulus threshold of the periphery is raised again. If all goes well, it will be raised to a level where pain remains subliminal and the organ is restored to a state of rest in which it can heal completely.
11. The redox system (reduction–oxidation system) is a metabolic chemical system that can absorb or desorb hydrogen depending whether its state is oxidized or reduced. The movement of electrons causes electrical potential: the electron conduction or re-

dox potential. Its level indicates the reduction or oxidization potential of a redox system. The system with a positive charge oxidizes the system with a negative charge and the one with a negative charge reduces the positive one.

With +290 mV (measurable with a platinum-calomel electrode), procaine has a high redox potential. Redox systems are important catalysts for the energy supply of cells. After dehydrogenation, they are responsible for the absorbtion and subsequent desorbtion of hydrogen to allow a gradual energy release, for example, during cell respiration. According to Warburg, depolarization of cytochrome c oxidase ("Warburg's respiratory enzymes") is the source of pathological processes because it deprives the cell of energy. In 1986, H. Lamers explained the healing potential of procaine with the fact that cytochrome c oxidase and procaine both have a redox potential of +290 mV. Procaine can repolarize and stabilize cytochrome c oxidase during depolarization, as long as the process has not turned autonomous. The flow of information and the regulation of metabolic processes in the basic autonomic system are restored.

12. In 1988, Professor Heine explains the neural-therapeutic effects of procaine as follows.

> Different from acupuncture, neural therapy uses the preferred pathways of somato-sensitive stimulation on the spinal cord level in two ways: through the injection point phenomenon and the local application of procaine. The injection point phenomenon produces an interneural pathway, i.e., preference of the affected somato-sensitive pathways with decrease or temporary elimination of only peripherally affected somato-sensitive and slower conducting viscero-sensitive pathways on the corresponding spinal cord level. This causes an interruption, particularly in the visceral feedback circuits, an "irritation pause," located in the interference field and in the corresponding dermatome. Sufficient duration and some form of individual regulation capacity of the ground substance in the affected organ or area can induce regeneration of the ground substance and cellular functions (stimulation of individual self-healing abilities). This effect can spread autocatalytically, causing a systemic improvement of the basic regulation. (See Heine 1988, Perger 1987)

Through the injection of procaine, neural therapy also extends the "irritation pause," and by diffusion of the local anesthetic into the surrounding environment it covers a larger area of ground substance with terminal axons than does acupuncture. Neither the bond between procaine and axon membrane combined with the inhibition of membrane depolarization (Fleckenstein 1950), nor the redox potential charge of mitochondriae, is the primary cause for the increase of the "irritation pause." Its primary cause is the bond between positively charged procaine molecules and acidic sugars of the ground substance components (glycosaminoglycane, proteoglycans, glycoproteins).

This is supported by the following findings: if agar plates, used in microbiology, are colored with an aqueous solution of hyaluronic acid (0.1 %) or chondroitin sulfate solution (0.1 %) following procaine incubation with aqueous solution of toluidin blue (0.1 %, pH 5.8), the metachromatic reaction is considerably lower compared with control tests. Isoelectric focusing shows the binding ability of procaine to polysaccharides. The bond between procaine and the above-mentioned 0.1 % hyaluronic acid solution is the strongest when the ratio is 1:1. The bond between procaine and the chondroitin sulfate solution is the strongest when procaine is diluted with distilled water 1:100 000. The binding ability of procaine with sugar chains applies also to sugar components (primarily hyaluronate and heparan sulfate with terminal neuraminic acid) of the cell glycocalyx and to axons that end blindly in the ground substance. The anesthetic effect is produced through the neutralization of the charge between axon glycocalyx and axon interior, thus, the affected axon cannot be stimulated. This causes an interruption in the corresponding segmental feedback circuit: dermatome—muscles—viscera—peripheral nervous system—spinal cord—higher lever nerve centers—dermatome etc. If an interference field is located in the affected area, the interruption of feedback prevents the central representation of the noxious agent as pain. This is also a form of "irritation pause" that allows recovery of the ground substance. The extent of success depends on the precision with which the feedback circuit is defined by neural-therapeutic measures."

To put the matter in a nutshell: these local anesthetics, if correctly sited, produce not only a temporary nerve block, but create a complex regulating effect, and reactivate and regulate the functioning of the neurovegetative and basic autonomic systems. Their normalizing action on the regulating systems alone comprises an extensive range. In other words, sympathicotonic effects have been shown to occur, as well as parasympathicotonic ones, i.e., evidence has been provided that these products are able to restore equilibrium in the vitally important neurovegetative system regardless of its initial state or disequilibrium. On one occasion they can raise tonicity, on another they act as relaxants and reversants, as required. When used correctly, they are able to block excessive pathogenic reactions, which would otherwise initiate and establish pathological processes.

Of the various theories on the manner in which procaine acts, let me here take Luzuy's. This states that three factors act within one another:

1. The correlating balance is restored between the glands producing internal secretions.

2. The function of the diencephalon is regulated, especially its effect on capillary blood supply.
3. The harmful reflex arc is broken, including the antidrome effect, which manifests itself by massive histamine production and turns the sympathetic system into a pathological vasodilator.

Despite its chemical relationship to a number of time-tested drugs and hormones, and the substantial number of useful properties that it has been proved to have, many questions remain open about procaine, which Reischauer called the "king of medicines." Empirical medicine has discovered cures for which all the known theoretical and experimental foundations available to us are still unable to provide adequate explanations. In this connection, the following may be worth bearing in mind: for the neural-therapeutic effect as such, which, as time has revealed, is by no means limited to any single substance, there is no other satisfactory explanation in scientific terms other than my repolarization theory. The equalizing and regulating effect on the neurovegetative system that lasts far longer than the anesthetic effect itself and that occurs even at dosages that are not enough to produce complete anesthesia, is the essential factor and far more significant than the sum of all the pharmacological components. This is shown all the more clearly when we find that large amounts of procaine injected intramuscularly or intravenously may be completely ineffective whilst even a minute quantity, accurately placed in an interference field, can produce the far-reaching chain reaction that we witness time and again in the Huneke phenomenon. Eichholtz and Muschaweck reached the conclusion, based on wide-ranging investigations, that the effect of the local anesthetics used in neural therapy according to Huneke is perfectly reconcilable with orthodox scientific experimental medical doctrine.

Originally, procaine was intended purely as a local anesthetic for use in surgery. But only a year after its discovery, G. Spiess, an ENT specialist in Frankfurt, published his observation that, apart from its anesthetic effect, procaine also developed therapeutic qualities and that it could be used to stop inflammation by infiltration around the affected area and thus allow this to heal more rapidly. Although this important detail was tested and fully confirmed at a number of hospitals, no attempt was made in Germany at that time to develop this line of investigation and these observations were allowed to be forgotten. The Pavlovian school in Russia paid greater attention to his work, but without recognizing the full extent of its therapeutic significance.

This knowledge was recovered only when the Huneke brothers, in 1925, accidentally rediscovered the therapeutic effect of procaine and made it available to every physician when they built it up into their "therapeutic anesthesia." They added the antidote caffeine to procaine, which, in larger quantities, can act as a convulsant, making it even safer for general use. It was soon found that the addition of caffeine not only reduced the toxic effect by half, but that it significantly increased the therapeutic effect at the same time. Nobody believed Huneke at the time. Sixty years later, Laska proved that an analgesic requires a 40% higher dose for the same pain-relieving effect if no caffeine is added. Caffeine acts as a vasodilator, notably in the region of the cerebral arteries, and of the coronary and renal vessels. It increases the permeability of the blood–CSF barrier and thus further reinforces the beneficial effect of procaine on the central nervous system. In 1928, Bayer Leverkusen put on the market and in the pharmacopeia this compound of 2% procaine and 1.42% caffeine as its effective agents in a sterile solution, under the registered name Impletol. The success of this product and the subsequent rapid spread of procaine therapy encouraged a number of other pharmaceutical firms to put "neural-therapeutic preparations" on the market.

Neural-Therapeutic Preparations Containing Procaine

In some countries, Impletol is on the market in identical composition under different names. If any of these preparations listed are used, the dosages indicated in the instructions for use should generally be followed, although in our experience these are often too large, so that accidents due to unnecessarily high doses are conceivable. Some of the products also contain additives apart from caffeine, with its detoxicating effect on procaine, and these, in our view, are not necessary and do not constitute any improvement on the original. These additives are intended to produce reactions that have nothing whatever to do with the effective principles on which neural therapy is based and are, on the contrary, more likely to mask their effect. We therefore prefer pure procaine or Impletol, or the products corresponding to these, and to keep to the dosages stated in Parts II and III of this book.

Neural-Therapeutic Preparations Containing Procaine, with Depot Effect

These were developed with the intention of further increasing the duration of the anesthetic effect. In the case of Depot-Impletol, resorption was retarded by the addition of Periston. This contains polyvinyl pyrrolidone (PVP) with the high molecular weight of 40 000, which, under certain reactive conditions, could produce foreign-body reactions. Other preparations have been produced with the addition of alcohol or an alcohol and oil additive. The manufacturers pointed out that

the use of these depot preparations would produce irreversible degenerative changes in the nerve fibers and ganglionic cells, which would then lead to permanent blocking of the nerves. We regard surgical or chemical intervention that produces any permanent blockage of important nerve fibers to be a serious interference in the network of our vital nerves, which is bound ultimately to lead to consequences that we are totally unable to assess. We have therefore always refused to use depot preparations and have demanded their withdrawal. Their existence was due to outdated ideas foreign to the thinking on which neural therapy according to Huneke is based.

We do not, of course, want to produce any long-term anesthesia. The ultimately decisive repolarizing thrust into the system can be achieved with the simple neural-therapeutic preparations without depot action, in a far less harmful manner. These destroy nothing, but if they are sited correctly, they restore order where it has been disturbed. No depot preparation can achieve more, even under the most favorable circumstances. Fortunately, all these depot preparations have now again disappeared from the market.

Neural-Therapeutic Preparations without Procaine

1. Plenosol is a mistletoe extract standardized to biological necrosis units. At intervals of 3/5/7 days, strictly intracutaneous quaddles of progressively increasing doses (from 0.1 mL of strength I, according to reaction, to 1 mL of strength II) are set around arthrotically and rheumatically altered joints (especially the knee). At the same time, any hyperalgetic points and nerve-exit points in the segment should also be sought out. Plenosol injected intracutaneously produces free histamine at the injection site, which, in turn, inhibits cholinesterase, because of which a protracted local acetylcholine effect is produced. Markedly diffuse paravascular aseptic inflammatory infiltrations occur, which persist for 3–4 days. They penetrate in depth where they produce a persistently increased blood supply and a relaxation of the tissues. The stimulus produced by the inflammation is transmitted centripetally onward by the autonomic nerve-end fibers, switched over in the spinal ganglion and retransmitted centrifugally back to the segmental periphery where it increases the deeper blood supply.

   Whilst procaine combats inflammation, Plenosol produces it. If no Huneke phenomenon can be achieved in joint disorders and the joint fails to respond to periarticular procaine quaddles, there is reason to suspect a regulation paralysis (Pischinger). In such a case Plenosol quaddles may be indicated as an inflammatory counter-irritant therapy and achieve better results than can be obtained with local anesthetics.
2. Segmentan is a 1.29% aqueous isotonic solution of sodium bicarbonate and is particularly indicated for patients with procaine allergy, for intracutaneous quaddles, and intramuscular and intra-articular injections.
3. Sensiotin contains hypericin D5 and atropin sulfate D5 in isotonic NaCl solution. During treatment, extended exposure to strong lights should be avoided. Ampoules of 2 and 5 mL.

Local Anesthetics with Amide Structure

In Seattle, in the United States, there is a pain clinic founded by the anesthetist Professor Bonica. Similar ones based on this example have been built all over the world. When anesthetists learned of the use of local anesthesia in segmental (neural) therapy, they used local anesthetics with amide structure that they were familiar with through surgery. They speak of "therapeutic local anesthesia" and tend generally to omit any due mention of the Huneke brothers as the originators of this therapy. The anesthetists like to use relatively large doses of the modern local anesthetics, as far as possible choosing local anesthetics with a long-lasting action, because they equate duration of the anesthesia with the therapeutic effect. They only consider the temporary blockage of nerve impulses to be the prerequisite for healing. We, on the other hand, believe that the repolarization and stabilization of depolarized cell membranes in disturbed areas with minimum doses of procaine, accurately placed for maximum effectiveness, is another aspect of neural-therapeutic phenomenon.

Into the 1950s, procaine was the leading local anesthetic in surgery worldwide for all regional anesthesias and "nerve blocks." For surgical purposes, the local anesthetics with amide structure, such as lidocaine, mepivacaine, or bupivacaine, have advantages over procaine and took over in the surgical area. For neural therapy according to Huneke, these advantages are irrelevant. The downside of the amide-structured local anesthetics shows, for example, in their longer detoxification time.

Procaine, an ester of aromatic acids, is doubly and rapidly detoxified, for the most part immediately, by serum cholinesterase, by fermentation in the blood and tissues, and only a small part by conjugation of the liver. The amide-structured local anesthetics, on the other hand, are detoxified only in the liver.

The substantial difference in detoxification shows clearly enough in the toxicity of these products, the comparative values being: procaine = 1, Scandicaine = 2, Carbostesin = 8! Care is therefore indicated where the patient suffers from liver damage, liver dysfunction, or is pregnant. Because of the rapid metabolism of the

complete molecule of the product, procaine is less often accompanied by toxicity symptoms and, if such occur, they normally pass off more quickly than is the case with local anesthetics of the amide variety. Moreover, procaine poisoning has the advantage of presenting primarily as a respiratory depression, which is easier to control than the mainly cardiotoxic effect of lidocaine, which can quickly lead to ventricular fibrillation or asystole. Nor are the new local anesthetics able to seal off permeable capillaries (Hirsch). We cannot, therefore, conceive of any compelling reasons to stop using the time-tested product procaine, even though it is not supported by clamorous publicity, particularly since we know that procaine does not affect intercellular transport in the nerve fibers, whilst lidocaine (Xylocaine) inhibits this transport and hence probably also the nerve functions as such (Kreutzberg). We therefore use these other preparations (e.g. Xyloneural) only in proven cases of procaine intolerance, and then only in low concentrations and small quantities.

We may summarize as follows. Any local anesthetic that does not contain a vasoconstrictor can be used for neural therapy according to Huneke. The least toxic preparation at the lowest concentration and in the smallest quantity adequate for the purpose is the best to use. It is also possible to achieve a neural-therapeutic effect, but to a lesser extent, without anesthetics, even by the intra- and subcutaneous injection of air. If one takes the needle alone and injects nothing at all, one is practicing a form of acupuncture, always provided the needle is correctly sited. The initial stimulus for the healing process can also be produced without a needle, by appropriate massage or any one of a large number of different forms of skin irritation. Every one of these therapeutic methods is intended to introduce outside energy into the tissue system, which will set off repolarizing effects in the basic autonomic system.

The neural-therapeutic effect is thus the result of an unspecific reversant stimulus that is not limited to any given neural-therapeutic preparation, although such products apparently prepare the way for an even more far-reaching specific healing effect!

4 The Question of Dosage

Medicines as such are nothing at all
if they are not used correctly.
But if prescribed intelligently
and after due consideration,
they are the hands of the gods.
Herophilus (fl. ca. 300 BC)

The quantity of the neural-therapeutic preparation is always of secondary importance! The only crucial point is the correct site for the thrust into the neurovegetative system! The sick organism is, as it were, under stress when its own wonderful regulating systems are blocked and its spontaneous healing powers are therefore prevented from functioning. It always tends to restore normality. We call this normality health. If our injection strikes the correct spot, the effect is like that of cutting a tensed bowstring with a knife, by which the bow reassumes its original straightness. In the living organism, this means that the insertion of the acupuncturist's needle or our injection at the correct site enables the body to pull out of its blocked state and allows the natural tendency towards equilibrium and normalization to regain its ascendancy once more and to become healing reality. The physician can only initiate the process. Nature (or whatever other label one wants to give it) heals: *medicus curat, natura sanat.* (Medicine cures, Nature heals.)

Huneke's neural therapy confirms the findings of acupuncture, which has continued to exist for more than 5000 years, simply because it works, because it helps the patient. He has freed acupuncture of its mystical accretions, made its essential elements clearly discernible, and simplified and complemented its complicated technique, making the art of the healing needle accessible to any physician. The healing stimulus given to the energy structure of the living organism by the thrust produced by the neural-therapeutic substance is, moreover, more comprehensive and more far-reaching than the needle on its own, because the local anesthetic introduces outside energy into the tissue system.

The healing counter-stimulus should always be as small as possible. Arndt-Schulz formulated this point in the following effectiveness rule: "Weak stimuli rouse the vital processes, average stimuli promote them, strong ones hamper and the strongest prevent them totally." Of equal importance to us, however, is the less well-known rider: "But it is an absolutely individual matter as to what stimulus will prove to have a weak, a strong, or the strongest effect."

The sick organism responds particularly readily to stimuli of all kinds. Even the weakest stimuli can produce extremely strong reactions. With procaine and its very wide tolerance, it fortunately happens only very rarely that a hypersensitive patient, or one who is greatly debilitated by long illness, will say that our treatment has affected him or her to such an extent that he or she has been obliged to stay in bed for a few days afterwards. In such cases, the patient's stimulus threshold is so low that, for once, our stimulus becomes excessive for them. This fact should be recorded on their clinical record card. On the next occasion, procaine should be given to them only a drop or two at a time, at only a small number of injection sites, and the quantities increased only very slowly. Treatment intervals should be increased. The quantity of this healing stimulus that the patient needs and/or can tolerate, and the amount of procaine required to produce it (always the minimum possible!), vary with the individual patient and are largely a matter of the physician's own

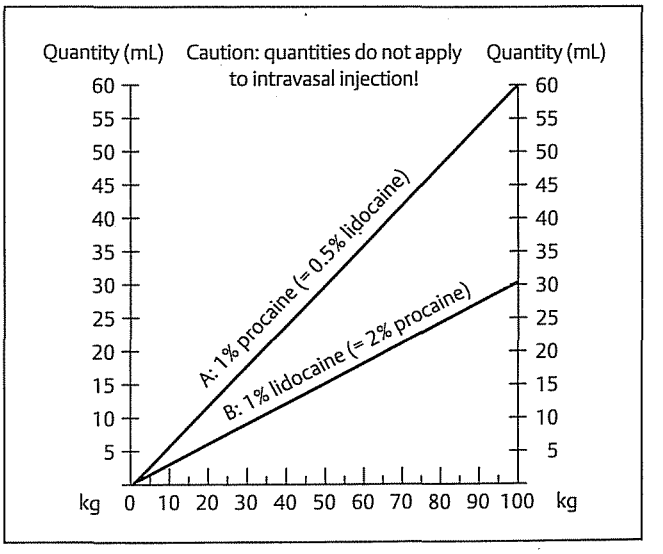


Fig. 3.1 Quick reference diagram for maximum quantities of lidocaine and procaine used in conduction anesthesia and local anesthesia, as recommended in Great Britain. The numbers refer to mL/kg of body weight. (Kelly DA. Use of local anesthetic drugs in hospital practice. BMJ 1983;286:1784.

"fingertip sensitivity." As we have stated, these occurrences are so rare that there is no need to feel any anxiety about them.

Figure 3.**1** provides a quick guide to the maximum quantities of lidocaine and procaine used in anesthesia, as recommended in Great Britain.

With increasing experience, one learns to use ever smaller quantities. Anyone who wants to practice neural therapy successfully needs once and for all to get rid of the idea that we can practice our healing anesthesia only if we flood the affected area with our neural-therapeutic preparation, in order to block the nerve paths. The terms "curative anesthesia," "healing anesthesia," "therapeutic anesthesia" and the like, used in the early days of neural therapy, were found misleading and have been dropped. As has been stated, it has been proved that in neural therapy the healing reactions are produced at concentrations of the pharmaceutical products used, which lie below those needed for anesthesia! Best of all is always the smallest possible stimulus that is just enough to produce a response from the neurovegetative system. More can all too easily be too much! If we speak of "stellate anesthesia," for example, when using local anesthetics for neural therapy, it is not the same as a complete anesthesia for surgery! The healing stimulus, in the correct pinpoint position, produces a fundamental reversal, which affects the whole organism. This effect always persists far longer than the anesthetic action of the preparation as such. The secret of success, and one that does not simply drop into one's lap, lies in the injection site, not in the quantity injected. A surgeon, for example, may "flood" an affected knee with 50 mL of procaine. We can achieve at least as good a result by distributing a mere 2 mL by means of five intracutaneous quaddles around the knee joint.

The quantities given in the text refer to 1–2 % procaine or 0.5–1 % lidocaine solutions. They are intended strictly as indicative, and generally represent about the upper limits of the amounts needed. For test injections, 0.1–0.2 mL will often be enough! Where one is dealing with such small quantities, it is perfectly possible to carry out several test injections in a single session. We never give more than 1 mL intravenously, unless the injection is administered particularly slowly. Any dizziness that may occur following a rapid intravenous injection is of no account and wears off after a few minutes. Injection of cold solutions can be painful. In winter, the ampules should be held in one's fist before use to bring them up to body temperature.

Maximum Doses without Vasoconstrictors

1. *Procaine:* The maximum dose for procaine given in the publications varies between 0.2 g (*Swiss Pharmacopeia*) for a single intravenous injection, to 5 g (Vishnevski) for infiltration anesthesia. Toxicity depends on the site of the injection, the concentration, and the time taken to metabolize the product. In accidents, patients are known to have survived 15 g, whilst in extremely rare cases fatal complications have been produced with far less than 1 mg. All theoretical maximum dosages are based on healthy adults weighing 70 kg. For children and patients in a reduced general state, dosages should be reduced by 30–50 %.

   For procaine, the usual maximum dose is 1 g, i.e., 14 mg/kg body weight, equal to 100 mL of 1 % solution. Since the toxicity of a local anesthetic increases as the square of its concentration, 100 mL of the 1 % solution correspond to only 25 mL of 2 % solution (100:2 × 2). The caffeine additive in the 2 % Impletol preparation increases the procaine tolerance by 30–40 %. In the areas of the head, neck, and genitals, a dose of 200 mg procaine within 2 hours should not be exceeded (*Red List*). *Quantities such as these are far greater than anything we ever use even approximately in a single session!*

   The very small quantities we use enable the patient to be fit for the road again after a waiting period of 20–30 minutes. There is no risk of habituation or addiction, even if procaine is given for lengthy periods.
2. *Lidocaine:* The maximum dosage is given as 200 mg, i.e., 2.9 mg/kg body weight. For Xylonest, it is 400 mg, for Mepivacaine 300 mg = 4.3 mg/kg body weight and 150 mg for Bupivacaine. The maximum dose for Xyloneural administered intramuscularly is about 20 mL. Because of the slower resorption as compared with procaine, road-fitness is achieved more slowly.

5 Procaine Hypersensitivity and Accidents

All things are poisons and nothing is without poison. Only the dosage causes a thing not to be a poison.
Paracelsus (1493–1541)

At the correct dosages, i.e., with minimum doses used correctly, the risk in neural therapy of using local anesthetics is exceptionally small. "For therapeutic purposes only, 0.5–1 % procaine solutions have proven effective, because the desired result can be achieved with minimal risk" (Killian). Complications are extremely rare. It has been estimated that the intravenous rate or complications for the large number of local anesthetics given daily all over the world is between 1:100 000 and 1:200 000. Most of these accidents result from overdoses.

We are convinced that many reported procaine incidents can only be attributed to overdoses. Thus, 20 mL of procaine solution used for a "stellate ganglion block" can cause a serious situation simply because of the mechanical pressure exerted on the carotid artery, for which the preparation cannot be held responsible. In the highly sensitive cervical region, the tolerance limit for procaine and lidocaine can be exceeded if 5–10 mL are used, but with the 2 mL we use, this type of complication due to the carotid-sinus reflex cannot occur. Also, refer to page 287 on possible mistakes and complications in injections to the sympathetic chain.

When one reads what are often self-important sensation-mongering reports on procaine damage, it is important to set its millionfold usefulness against the occasional and generally avoidable accident, and then decide whether to allow oneself to be irritated by them. Most of these incidents have been reported from dentistry. The majority of them are due not to the use of pure procaine, but of procaine with the addition of vasoconstrictors such as adrenalin or its derivatives. However, for the sake of comprehensiveness, let us now consider in detail the side-effects that may be produced and all the types of accident that could occur:

Depending on the patient's initial autonomic state, the quantity used and their tolerance, some patients will feel stimulated or excited after being treated; others comfortably relaxed. Dilation of the pupils, a faster pulse rate, dizziness, trembling, a higher blood pressure followed by a drop a little later, a sudden outbreak of sweating, and a sense of exhilaration akin to intoxication are reactions that pass quickly and prove to us the extent to which the sympathetic system and vagus have been involved and are responding. If Impletol is used, none of these should be attributed only to the caffeine component but should be regarded as the result of a general reaction and as a response to the healing stimulus. Euphoria that persists beyond half an hour cannot, of course, be explained in pharmacological terms. We take it as a welcome effect of the positive chain reaction that procaine is able to set in motion. It proves that we have been able to switch off a negative influence on the patient's psyche. Because of this sense of euphoria produced in some patients, we must be careful to use considerable reservation in judging the success achieved when we make our assessment immediately following treatment. And the fact that the neurovegetative system as a whole tends to respond and react to any insertion of the needle does not absolve us from the need to seek and find the correct site for every one of our injections.

When injecting local anesthetics from multiple dose vials, the required bacteriostatic additives (methylparaben, benzyl alcohol) may cause local irritations when injecting in the area of the spine; and toxic cerebral irritations, including headache, vertigo, vomiting, meningitis (Krauseneck), when injected intrathecally (into the spinal canal) in root diverticuli or root sheaths by mistake. This is the reason why ampoules are used when injecting neural therapeutics near the spine. They do not contain bacteriostatic additives or caffeine (as Impletol does). According to product information, multiple dose vials should only be used for 3 days and kept refrigerated after the first use. Procaine solutions with yellowish discoloration should be discarded.

Procaine intolerance and allergy are a good deal less common than is generally assumed. Reischauer only allowed skin allergies following procaine and described all others as museum pieces. In 100 000 paravertebral anesthetics of the sympathetic system and the spinal segments, he did not observe a single allergy. In my first 20 years of extensive neural-therapeutic practice, involving what are by now innumerable patients, I witnessed procaine hypersensitivity on only three occasions. Two of these were women who tolerated subsequent treatment with lidocaine without further

difficulty. One of them also proved allergic to iodine. Following an intravenous procaine injection and quaddles on the chest, there was circumscribed urticaria around each of the injection sites. Itchy reddening over a 2-year-old bone fracture was of particular interest. When this was tested with lidocaine, it proved to be an interference field responsible for her angina pectoris symptoms. We have often had the experience that following treatment, interference fields signal their presence at totally different sites. It is therefore extremely important that doctor and patient should look out for such signs.

In the case of a 6-year-old boy, there was a severe allergic skin reaction after the initial treatment of a smallpox-vaccination scar, which was acting as an interference field producing progressive muscular dystrophy (Case History 29, Part II). Following a second injection, the reaction was considerably attenuated, and thereafter it did not recur, although the same preparation continued to be used. I learned of this allergic reaction only after the patient had been cured, or I should have changed the preparation used. But this taught me that procaine allergy, like any other, can also be due to an interference field.

On the other hand, one is also bound to admit that during the last few years there seems to have been a general increase in procaine allergies. With the ever-increasing abuse of medicaments and the flood of new products being thrown constantly on the market by the pharmaceutical industry, the number of allergic patients has also increased. Thus, the frequently thoughtless use of procaine-penicillin against harmless colds or even for prophylactic purposes has doubtless increased, not only the number of penicillin allergies, but with it the number of iatrogenic procaine allergies.

Substances have a longer-lasting effect when combined with procaine salts. For example, when added to penicillin, it slows down its decomposition and provides consistent effectiveness for hours. The slowing down of the resorption process is due to the poor solubility of procaine. Thus, procaine can be found as an additive for a large number of preparations, with the popular side-effect that intramuscular and intra-arterial injections are now pain-free. The therapeutic effect of procaine is credited to the preparation but not the allergic sensitization. Even the frequent use of sunburn creams with surface anesthetics can produce sensitivity to ester-based local anesthetics. P-aminobenzoic acid (PAB) occasionally causes an allergic sensitization attributable to the para-amino group.

A para-group allergy can also occur with substances having a primary amino group in the para position in the benzol ring, such as sulfonamide, antihistamines, azo dyes, saccharin, ball-point ink etc. Part of this group is methylparaben, which is frequently added to local anesthetics as a preservative, particularly to multiple dose vials. About half the patients who are allergic to sulfonamides supposedly do not tolerate procaine well. A para-group allergy in the allergy record ought to warn us to be careful and suggests the performance of the tests outlined below.

Hahn-Godeffroy calls "para-group allergy" a "mare's nest." He considers it merely a product of theoretical, structure-analytical thought that has found its way into pharmacological textbooks without sufficient clinical confirmation. Skin allergies do indeed occur, but a consistent sensitization with subsequent increased anaphylactic risk has not been reported since the 1950s.

According to the textbooks, procaine allergy shows itself by reddening around the injection site, local edema, and, possibly, by a weeping eczema, which, in severe cases, may become generalized. In specialist literature, one can also find mention of allergic purpura and the formation of necroses.

After administering the first drops of procaine, we observe every patient carefully to ascertain whether any symptoms of procaine intolerance appear. If in doubt, where the patient reports that he or she is allergic to Pyramidon and other procaine-related products, we set an intracutaneous test quaddle the day before starting treatment proper. If this test proves positive, i.e., if there is reddening and itching, we switch to 0.5 % or 1 % Xylocaine, 0.5 % or 1 % Scandicaine without adrenalin, or Segmentan, for his or her further treatment. The patient's record card should be clearly marked to this effect, to prevent mistakes and accidents in any later treatment. If lidocaine is left for any time in contact with heavy metals, decomposition may occur. Filled syringes should not, therefore, be left lying around for any length of time, and after use, all metal parts should be thoroughly cleaned of any residue.

Allergy Tests

A rapid test that is perfectly adequate for general practice and that furnishes the requisite information on the patient's toleration of procaine is the procaine-conjunctival test. Before starting treatment, a drop of procaine, or whatever other neural-therapeutic preparation is to be used, is given into the conjunctival sac. If during the next few minutes the conjunctiva becomes markedly injected, this indicates that the patient may be hypersensitive. In addition, we also do an intracutaneous test, by setting an intracutaneous quaddle on the flexor aspect of the forearm and, at some distance from this, a control quaddle with a physiological saline solution. If the procaine quaddle and its surrounding area start to redden and itch during the next 10 to 15 minutes, an allergy must be assumed present and an amide-structured neural-therapeutic preparation, such as Xyloneural, should be used instead.

Du Mesnil de Rochefort and Hensel showed through a thermal conduction meter that, after the initial increase of blood supply, intracutaneous lidocaine quaddles cause considerable vasoconstriction, while procaine causes merely a noticeable skin hyperemia! This explains why the intracutaneous test should not be used by itself but always in combination with the conjunctival test. The skin test frequently produces vague and questionable positive results. To conclude that there is a high allergy potential with procaine is an unacceptable fallacy!

The most dangerous complications occur when a large quantity of local anesthetic is accidentally given intravenously or intra-arterially (especially if it contains a vasoconstrictor!), since in such cases severe toxicity can occur immediately. Intoxication resulting from overdoses injected extravasally, on the other hand, will be slower and less dangerous. We also need to take into account that resorption is more rapid and thus occurs in larger quantities in areas where there is a good blood supply, e.g., in the region of head and neck. Moreover, procaine itself stimulates the blood supply. But let me emphasize once again: by using only the small quantities recommended and by aspirating before injection (especially when we are about to inject relatively large quantities), these risks can easily be avoided.

With overdoses, there is the risk of procaine shock, which, in a reflex breakdown of vital central functions, can lead to death from acute shock, or the patient may suffer from convulsions or circulatory failure. A clear distinction should be made between hyperventilation tetany and procaine incidents as such. A procaine overdose acts as a convulsant toxin, and caffeine is used as an antidote. In Impletol, caffeine has already been added to the procaine in an ideal combination, because of which the procaine is largely already detoxified. In the small quantities normal in neural therapy according to Huneke, it can be used without hesitation. As has been stated, the maximum dose of 35 mL of procaine is never injected in a single session!

A special warning must also be given against the use of adrenalin or supra-renin additives with procaine, especially for intravenous injections. These additives increase the toxicity of procaine by a factor of 10 (Keil, Rademacher). Paul examined 290 cases of poisoning through Novocaine (procaine). In 47 of 48 cases that resulted in the death of a patient, the cause was the application of procaine-adrenalin mixtures. Only one case resulted from overdose.

Nor should patients who are under treatment with opiates (morphine, Dolantin, etc.) be treated with preparations containing procaine or, if they are, only with the greatest care, since opiates substantially reduce the tolerance ratio of procaine. In addition, the use of beta-receptor blocking agents (e.g., Aprinidin) together with local anesthetics should be avoided, since their effects can then become cumulative. According to Muschaweck, the addition of vasodilators, barbiturates, caffeine, or PAB reduce toxicity without considerable impact on the anesthetizing effects.

Complications that can occur in injections to the → (T) sympathetic chain are dealt with in the description of the techniques for these injections in Chapter 8, p. 289.

6 Countermeasures in Accidents

In all cases of mishaps, keep calm, do not panic! Act promptly and purposefully! Instruments and medicaments should always be within easy reach and ready for use.

True mishaps and side-effects of neural therapy according to Huneke due to injection doses, types, and concentration are considerably lower than those caused by negligence of proper injection techniques. In 45 years of extensive practice of neural therapy I have not, with the exception of slight allergic skin reactions, ever witnessed any of the complications described below. However, for the sake of comprehensiveness, they must be included in a manual such as this. Everyone who practices neural therapy must know the risks (which are all avoidable) and must be prepared to deal with possible accidents.

a) Psychogenic Reactions and Mild Collapse

Vasomotor disturbances can occur due to anxiety, pain, and breath-holding, especially in autonomically stigmatized patients. These may lead one to fear a mishap, although, as a rule, they are absolutely harmless. Where the patient's vascular regulation is labile, a massive drop in blood pressure may produce unconsciousness. Warning symptoms are pallor, slight nausea, a thin, racing pulse, shallow respiration, and sweating.

Treatment Lie the patient flat, with legs raised. If he or she reacts to vocal stimuli, encourage deep breathing. If the doctor's behavior is sufficiently assured and unflurried, this will generally induce a rapid recovery in the patient. If necessary, give oxygen. Circulatory stimulants such as Effortil are only rarely needed, and the same applies to valium, which, if given, should not exceed half an ampule. Verbal reassurance to the patient and anyone accompanying him or her will generally be all that is necessary.

Severe states of collapse following irritation of the carotid sinus, produced by unskillful stellate-ganglion anesthesia, are true states of shock and must be treated exactly like anaphylactic shock.

b) Hyperventilation Tetany

Make the patient hold their breath or place a hand over their mouth. Or have them breathe for 2–3 minutes into a 1–2-litre plastic or paper bag, which they should hold over their face, covering mouth and nose. At the same time talk to them quietly and, if necessary, demonstrate how to use the re-breathing bag.

c) Allergic Reactions

Table 3.**2** below provides some countermeasures against allergic reactions.

Table 3.2 Countermeasures against allergic reactions

Reaction	Prophylaxis	Tests for Suspected Procaine Allergy
Allergic reactions/ anaphylactic shock	If available, check the patient's allergy card for any known para-group allergy. In the presence of procaine allergy, use lidocaine (e.g., Xyloneural).	*Conjunctival test:* Place one drop of the solution for injection in the conjunctival sac. If the conjunctiva becomes injected after about a minute, suspect allergy *Skin test:* One intracutaneous quaddle on flexor aspect of forearm and, if required, a control quaddle with physiological saline solution. If there is distinct erythema of the procaine quaddle and its vicinity, suspect allergy. If in doubt, wait for reaction after injection of the first two or three drops of procaine *Treatment:* Antihistamines; in cases of severe urticaria: corticosteroids and volume replacement
Slight allergic reactions: itching and reddening at theinjection sites, urticaria, dermatitis		

Table 3.3 Countermeasures against anaphylactic shock

	Reaction	Treatment
Anaphylactic shock	Severe reactions (extremely rare) *Important:* No convulsions! *Symptoms:* Extreme pallor, sweating, urticaria, dermatitis, angioneurotic edema (especially of the eyelids), pruritus, joint pains *Dangerous:* Acute respiratory difficulties, dyspnea to cyanosis, bronchospasms, asthma Cardiovascular collapse with sudden drop in blood pressure, stupor, or unconsciousness	Keep calm! Lie patient flat, with legs raised Intravenous corticosteroids, e.g., Solu-Decortin H, Urbason solubile forte, 250 mg (several times daily, to maximum of 3 g) Plasma replacement with Rheomacrodex and the like Vasoconstrictors such as Effortil, Novadral, Arterenol, but no centrally acting analeptics (avoid Coramin, Cardiazol, Cormed, etc.)! 1 mL adrenalin 0.1 % subcutaneously, distributed over several injection sites, repeat if necessary; in emergencies, also 0.1 mL 0.1 % intravenously The following may be given in addition: Antihistamines such as Synpen, Antistin, Tavegil administered intravenously. Calcium: 10 % calcium glutonate solution, e.g., Calcium Sandoz, 10 mL slowly administered intravenously Alupent: In less severe cases, Alupent or Aludrin spray, or slowly inject half to one ampoule Alupent or 0.5 mg Atropin intravenously Oxygen

d) Anaphylactic Shock

Table 3.3 provides countermeasures specifically against anaphylactic shock.

e) Poisoning Due to Overdose

Table 3.4 outlines the symptoms and procedures for treating overdose.

f) Shock Conditions

Injection into the Anonymous Vein (Subclavian Vein)

If the patient is in severe shock, it may be difficult to find a peripheral vein for injection. The anonymous vein (brachiocephalic vein, sometimes also referred to as the subclavian vein), still remains available in an emergency. This is one of the largest venous trunks in the body. Its 20 mm lumen never collapses because it is fixed by interstitial tissue and the subclavian muscle. If the correct technique is used, the injection is practically without risk. No thrombus will form even if the needle is left in position for some time and after repeated injections.

Technique: Turn the patient's head to the side opposite the injection. Palpate the lower edge of the clavicle. At the osteochondral junction next to the sternum there is a flattening. The injection site for the 80 mm-long 1 mm needle is 10–15 mm laterally from this. To ensure that after passing the lower edge of the clavicle the needle will go in the right direction and to the correct depth, it should be pushed medially and slightly cranially towards the posterior surface of the head of the clavicle, aspirating all the way. The anonymous vein is reached after 30–60 mm. If the direction is wrong, one may accidentally pierce the subclavian artery, which is located dorsally from the anonymous vein, but this can be recognized easily by the bright red blood entering the syringe in spurts. After correcting the position of the needle and ensuring that it is definitely in the vein, proceed with the injection. The dome of the pleura is more posterior and is unlikely to be punctured, but should a minor pneumothorax occur, it will resorb by itself.

g) Further Precautions and Contraindications

In view of the small doses involved and its excellent tolerance, the procaine solution can be given without hesitation to patients with liver disease, arteriosclerosis, cardiac decompensation, myasthenia gravis, hormonal disturbances of all kinds, thymolymphatic state etc. For exceptionally sensitive and cachectic patients, minute quantities will often suffice. The whole of procaine therapy, using small dosages, and observing the few precautions explored in this manual, is absolutely free from risk and suitable for any patient. It is perfectly compatible with any other preparations and therapeutic methods (except those specifically mentioned) and can therefore be used at all times.

In hypersensitive patients, where the psychological factor and the need to show off play a dominant part, one must not be irritated by reports of a worsening in

Table 3.4 Countermeasures against poisoning due to overdose

Condition	Symptoms	Prophylaxis and Treatment
		Usual dose (without vasoconstrictors): procaine 2 % 25 mL, 1 % 100 mL; lidocaine 1 % 20 mL, 0.5 % 80 mL *Prophylaxis:* Small quantities, avoid accidental intravascular injections by prior aspiration
1. Central effects on cerebral cortex and medualla	*Leading symptom:* convulsions!	
a. Excitation stage	*Warning symptoms:* Headache, dizziness, tinnitus, restlessness, disorientation, speech difficulties, tremor, drowsiness *Dangerous symptoms:* Tonico-clonic spasms, convulsions Increased cardiac rate, rising blood pressure, rapid irregular respiration, nausea, vomiting	*Most important:* Oxygen supply via mask and respiration bag! Check blood pressure and pulse Insert self-retaining cannula in forearm, keep airway clear!
b. Paralytic stage	Clouding to loss of consciousness, extreme dilation of pupils, drop in blood pressure, poor pulse, possibly ventricular fibrillation or asystole	To combat convulsions: a. Valium: one to two ampoules intravenously (0.25 mg/kg body weight) b. Barbiturates only if convulsions predominate, e.g., Epivan 1.0: 6–10 mL intravenously injected slowly (10 mg/kg body weight) c. Muscle relaxants (only if artificial respiration is possible!), e.g. Succinyl-Asta 15–30 mg. Apnea will last 1–2 minutes and must be bridged by artificial respiration with oxygen.
2. Peripheral cardiovascular effects	Bradycardia, cardiac failure, vasodilation, cerebral edema	*Cardiac failure:* Plasma substitute such as Rheomacrodex, with the addition of 0.5–1 mL Arterenol to 500 mL plasma substitute Head low, legs high, oxygen! *Bradycardia:* 0.5 mg Atropin subcutaneously or injected slowly intravenously, or 1 mL (0.5 mg) Alupent slowly intravenously; also in cases of cardiac-rhythm disturbances *Cardiac arrest:* Reanimation with external heart massage, mouth-to-mouth resuscitation, half to one ampoule of adrenalin 0.1 %, if necessary repeat at intervals of 2–5 minutes Alupent: one to two ampoules intravenously or one ampoule of 0.5 mg intra-cardially 5–10 mL calcium gluconate 10 % intravenously Infusion of 60–150 mL sodium bicarbonate solution 8.5 % *Cerebral edema:* Injection of one to two ampoules Lasix intravenously When danger is past, send the patient to hospital for further observation.

their condition or of negative side-effects. The dosages for subsequent treatment may be reduced, stress being laid on the fact that neural therapy cannot ever harm the patient. A doctor must never let the patient take the reins out of his or her hands!

When there is a change in the weather, a thunderstorm in the offing, or severe atmospheric disturbance, sensitive patients are more easily disturbed and irritable. They are more liable to collapse, and injection sites will tend to bleed longer. For these reasons, Japanese acupuncturists prefer, as far as possible, to treat patients only on days when the weather is less critical.

It is also worth remembering that procaine (or, more precisely, the p-aminobenzoic acid and its ester)

negates the bacteriostatic action of sulfonamides in vitro. Hence, the administration of sulfonamides side by side with procaine therapy is likely to be ineffective. If the administration of sulfonamides is indicated, procaine, which is resorbed after 30 minutes, or lidocaine, which is resorbed after 1–3 hours, is injected first and when the resorption time has passed, sulfonamide is administered.

Long-term anticoagulants (such as Marcumar, Sintrom etc.) are a relative contraindication to procaine. Prophylaxis with these preparations against thrombosis and infarction is in practice effective only if the prothrombin value can be reduced to about 20–30 %. But at this level the tendency to bleed and the possibility of severe bleeding following injury and deep injections are increased.

In outpatient treatment, these ideal values are hardly ever achieved and generally remain within the 30–40 % bracket. Cautious authors warn against intramuscular injections when the prothrombin value is below 70 %, which, in fact, can be the case in liver or renal insufficiency even when anticoagulants are not being used. This value is certainly somewhat high, and a minimum around 45 % is more reasonable and still acceptable. Test injections into scars and quaddling are still justifiable even where the clotting ability of the blood is reduced. But for purely forensic reasons, deeper intramuscular injections, anesthesia of the sciatic nerve, and especially injections in the vicinity of major blood vessels, should be avoided when the prothrombin value is below about 45–50 %! If a patient on anticoagulants starts to bleed, vitamin Kl (Konakion) should be given as an antidote. As a rule, patients undergoing anticoagulant treatment are supposed to carry a supply of this with them.

The constantly recurring theme in this book, of referring to possible mistakes, risks, and side-effects, is intended to provide all the safeguards the novice may need, but it should not be taken to suggest that these injections involve any kind of special hazard. On the other hand, it would be equally wrong of us to minimize the risks (which, after all, are always present wherever and whenever a physician has to act) or if we were to encourage fellow doctors to wield the syringe indiscriminately and to jab the needle without concern. This would be useless, and any injections that are not accurately pinpointed are bound to be of little or no avail. In fact, our problem is the reverse, since we need to infuse our colleagues with a little courage and, above all, to disperse their conditioned fear of injecting with the long needle. Time and again one reads of procaine accidents and even fatalities, particularly where the stellate ganglion is injected (one fatality in 10 000 injections!). A survey made by the Bayer pharmaceutical company found not a single fatality to have occurred as a result of using Impletol, in all the 65 years it has been in use. Mistakes made by individual practitioners should never be blamed on the method. Since surgeons occasionally give as much as 100–250 mL or more of procaine solution at a time, one ought to, when reading this kind of report, always ask what type of local anesthetic, concentration, and quantity, which additives and technique was used.

Even though the risks are practically nil when the proper technique is used, every neural therapist ought nonetheless to have all the medicaments and appropriate equipment ready to hand for dealing promptly with possible emergencies. For the rest, any hesitation that places his or her own safety above that of his or her patient is unworthy of a doctor's professional duty. Anyone who wants to help the sick cannot be afraid of personal sacrifice or shy away from the need to overcome whatever obstacles may be put in his or her path. And no doctor is ever too old to make new discoveries, to relearn, to learn a little more than he or she knew before! "We are not only responsible for what we do but also for what we don't do" (Voltaire).

There is nothing more difficult than making a start. For the beginner, I recommend that they learn, first of all, to decimate the hosts of those suffering from chronic headaches, by using the perfectly simple, straightforward intravenous injection and the injections under the scalp, and then to use these same injections for vertigo, insomnia, and post-concussion disturbances. By these, they will increase their experience and skills, and gain grateful patients, which will then give them the strength to continue further along this road. And when they have learned to help a patient with lumbago by means of a few well-placed quaddles, and with a few quaddles around the joint to reduce to a fraction the problems created by a painful knee, they will automatically discover other steps leading them to selective segmental treatment. At this point they will experience the pleasure of using a simple procaine injection to the trochanter major to turn someone who has been seriously ill with hip disease into a happy, healthy person once again. Suddenly, they will find that they have become intoxicated by procaine's potential. And once they have succeeded in making a previously unresponsive disease disappear in front of their eyes with a Huneke phenomenon, by injecting a scar, the tonsils, or some other interference field, they will be a convert to this new art of healing to such an extent that the inevitable failures that come to every one of us will no longer be able to make them abandon the syringe forever. I myself stopped practicing neural therapy on two occasions, because things seemed to go less well than I had hoped; I could take the hurdle barring my way to knowing 'where' only at the third time of trying!

We need to bear in mind at all times that each case is different. The key to success cannot be supplied in

the form of a universally applicable blueprint. None of the suggestions and methods proposed in this manual represent a dogma, they are merely intended to show the possibilities available to us that have proved themselves in practice. Apart from the frequently encountered reactive points in the skin and in deeper tissue, every patient has his or her own personal points and zones, which it is always worth the effort to find and eliminate. Each approach, each method, each road can by itself alone lead to success, but often enough we need to combine two or more in order to succeed. To do this with singleness of purpose in the interests of the sick calls for more than good intentions and a brilliant technique. Our therapy demands a lot of fingertip sensitivity, both literally and metaphorically. This is a gift given to the physician who has an active love for his or her suffering fellow human being. For this reason, neural therapy will generally be more effective in the hands of the physician who practices the art rather than the science of medicine.

7 Important Rules for Practical Applications

Un peu moins de science,
un peu plus d'art, messieurs!
(A little less science, gentlemen,
and a little more art!)
Trousseau

Before reaching for the syringe, it is essential to establish a thorough, purposeful clinical history and make an accurate examination in the conventional sense, supplemented by an extensive inspection and, particularly, palpation, in order to determine where our injections will be most effective. Following this (and after evaluating the reaction to the last treatment given to the patient) the plan of treatment for the present session is established and discussed with the patient. He or she is entitled to know what we are doing and why. We want to place our neural-therapeutic preparation with the minimum number of carefully thought-out injections where, as a result of our earlier examination, we expect to find disturbed and disturbing tissue.

However, the technique for the injections must not be allowed to act as an obstacle between patient and doctor. With increasing experience and an intensive empathy with the patient, we can acquire the fine fingertip sensitivity that tells us in what neurovegetative state the patient happens to be. This then determines what we can expect him or her to accept on this occasion.

We do not provide treatment for any given disorder in accordance with a blueprint; we are concerned with treating sick individuals who react differently from one another. Even the same patient does not always respond to the same stimulus in exactly the same way. The stimulus dosage must conform to the patient's age, their constitution, the duration, and severity of their disorder, and to their general physical and psychological state. The intervals between treatments must also depend on the severity and duration of any positive and negative reactions produced by the treatment. As a rule of thumb we may take it that, in acute conditions, the quantity of procaine or lidocaine that can be administered and the number of injections that can be given will generally be greater and the intervals shorter. In chronic disorders, on the other hand, we generally start with smaller stimuli and approximately weekly intervals between treatments. The older the patient, the longer their disorder has lasted, and the more severe it is, the more their basic autonomic system is blocked, the smaller will be the quantities we administer, the smaller the number of injections, and the longer the intervals (up to 4 weeks between treatments).

Before giving any injection, a neural therapist must have the following four points clearly in his or her mind:

- site of injection;
- direction of injection;
- depth of injection;
- what other factors must be taken into account.

Pain should be kept to a minimum for the patient. My surgery assistants have standing instructions to hold the patient's hand when I have to hurt him or her. This wordless help as a gesture of brotherly love is a good deal more effective as psychotherapy than a mass of words can express.

During the injections, which I give in rapid succession, I talk to the patient in order to distract his or her attention. Even the instruction to breathe deeply and not to hold their breath is of help to them. From a psychological viewpoint it is also right, before giving any injection to painful areas (fingers, toes, perineum, mandibular nerve etc.) to warn the patient that this will now hurt a great deal. Thus prepared, he or she will bear the pain much better. Praise for showing courage is always welcome. A little joke is always far better than a scientific lecture. There was always an air of jollity in F. Huneke's practice. I have adopted this as a desirable objective worthy of emulation, although, despite this, one can still take one's work very seriously indeed.

As we have seen, segmental therapy encompasses all our efforts at the site and within the relevant segment of the disorder. If, for example, in a mainly right-sided migraine, I inject 1 mL of procaine into the right antecubital vein, bilaterally under the scalp, to the hyperalgetic spot confirmed by palpation at the exit point of the right supraorbital nerve and another to that of the right suboccipital nerve, then this carefully selective polypragmatic approach consisting of five injections constitutes a single segmental treatment. From segmental therapy, we expect only a substantial improvement. Even if all pain and symptoms disappear instantly immediately after segmental treatment, we

do not describe this as a lightning reaction, as a Huneke phenomenon.

Before further treatment, we must first await the patient's particular reaction to the previous treatment we have given them. If a treatment series is repeated too soon, it may result in worsening the patient's condition instead of improving it. In such cases, the stimulus strikes a (positively) altered organism, which may respond differently, perhaps negatively, to the new stimulus. Let sleeping dogs lie! Speransky taught that "if the effect of the treatment is positive immediately, then the interval should be increased before repeating the treatment or giving further treatment." "More helps more!" does not apply here, neither with regard to the number of injections nor to the number of treatments. An excess of stimuli can only harm. Often, the body responds either not at all to a barrage of too many injections, accounting it as an excessive stimulus, or its response may be negative. One must not, therefore, give in to pressure by the patient in the sense of "another one here and another one there!" Only if the disorder recurs should the treatment by which a temporary improvement was achieved be repeated. It should be carried out at the same site and in the same manner as before. Such repeated segmental treatment must then increase in effect until a complete cure has been achieved.

If the first treatment in the segment has produced no improvement or if the improvement is only temporary and its effect cannot be satisfactorily increased on repetition, further segmental treatment at the same site is pointless and should be abandoned. It is possible in the course of treatment, after one or more interference fields have been removed, that segmental treatment shows improved results. In that case, interference field and segment can be treated together. Thus, if in our case of migraine the treatment described above has failed and injections to the Gasserian (otic), stellate, pterygopalatine and ciliary ganglia, to the temporal, vertebral, and carotid arteries, an infiltration to the posterior third of the nasal conchae, and a nasal spray have also proved ineffective, all further efforts in the segment are pointless. The segmental treatment of migraine comprises all these measures. Any single one of them may be adequate by itself for the patient in question and may lead to success, possibly after repeating the treatment a number of times.

There are no two identical diseases, since there are no two identical human beings. Hence, everything stated in this book can be regarded only as a series of tips and suggestions outlining some of the potential available to us through neural therapy. Only someone fully familiar with all the possible injections and who knows how to make intelligent use of them is a practitioner of neural therapy according to Huneke. No one who is not familiar with the method should presume to sit in judgment over it.

And now, what happens next to our migraine? The following basic rule cannot be repeated often enough: if our conventional methods have failed and segmental therapy has not taken us any further forward, our next task is always to look for the interference field! In the case of our migraine patient we find the following in her history. As a child, she suffered from diphtheria, scarlet fever, and frequent sore throats. First menstruation only at the age of 16, dysmenorrhea with nausea and vomiting. Migraine started during first pregnancy, forceps delivery with episiotomy; later two miscarriages, one febrile. Carbuncle scar on back, barely visible scars on inside of both first metatarsophalangeal joints following hallux valgus surgery. Several teeth with dental crowns and pivot teeth.

Where should we expect to find an interference field? The tonsils could be the culprits, the pelvic region is under considerable suspicion, and we know that any scar and any devitalized tooth can be an interference field. Further, we also need always to bear in mind Huneke's thesis and take it literally: any disorder may be caused by an interference field; any point of the body may become an interference field!

We therefore first test the tonsils at the upper and lower tonsillar poles, since the tonsils are the most frequently encountered interference field of all and can be tested so easily. The patient states that her headache remains unchanged. We mark her record sheet: Tonsils 0. After the negative test result any further injection to the tonsils is pointless.

This is followed by an injection into the pelvic region. The patient tells us: "All of a sudden my head feels so light, all the pain is disappearing like morning mist when the sun comes out." After waiting a few minutes, she tells us happily that all her symptoms have completely disappeared. We mark her record: Pelvic region +.

As instructed, she comes back 3 weeks later because her headache has returned. She reports that in the meantime she has been feeling very well, that she can now sleep without tablets, and that the unpleasant vaginal pruritus that she did not mention before out of embarrassment has gone. She also reports that she no longer has pins and needles in her hands at night. Although her headache tried once or twice to come back, it has been a fully-fledged migraine only since yesterday. From this we learn that a single interference field may act as trigger for and keep several disorders going at the same time. Obviously, on this occasion we treat only the pelvic region. Again, the symptoms disappear at once. We mark her record: Pelvic region ++. We dismiss the patient and tell her to come again if pain recurs.

Three months later, further treatment becomes necessary. The woman has meanwhile blossomed out and is more than happy to have found relief after so many

years of suffering. She tells us that she has been completely free from pain until it reappeared after a strenuous spring-cleaning. Thus, the second treatment remained effective for longer than the first that helped her 100%, and that had lasted longer than the required minimum period of 20 hours. All the conditions for a lightning reaction as established by Huneke have now been met and I can mark her record with three crosses: Pelvic region +++ = Huneke phenomenon.

Unfortunately, matters do not always run as smoothly as that. Often, the information provided by the patient about his or her clinical history and the effects of the injections is so unreliable that it can be used only with considerable reservation and care. Frequently, there is the slow, wearisome business of searching, discarding, groping towards a conclusion. There is no rule about whether or where one ought first to look for an interference field or start with segmental treatment. Where the patient is in acute pain, the segmental approach as a first step is always right. It is also, of course, possible to combine both methods at a single session, first giving one to three test injections and then, if these produce no results, switching to segmental treatment.

It is most important to keep a complete and accurate record of all injections and in the order they are given! Failure to do this means that one is bound to lose control and will not know the next time what has already been done and what should be done next. Anyone who subjects a patient to a barrage of injections, in the fond hope that one shot is bound to hit the target, should at least have the decency not to call this type of quackery neural therapy. Our objective is not to give merely momentary pain relief and produce a short-term improvement in the patient's condition. To restore the function as far as this is still possible must be at the core of our treatment. Whilst our treatment plan must always be flexible and adaptable according to the reactions it produces, it must never be uncontrolled. Hence, any change found on palpation or in the mobility of a joint must be marked in addition to what the patient tells us. We mark every subjective and objective improvement with a +. In segmental therapy, this is enough for further injections to the same site(s).

In looking for an interference field, it may be worthwhile repeating the treatment and, if this still fails to produce any adequate results, to subject the neighborhood to a more thorough examination. There is such a thing as a neighborhood reaction, an incomplete response to an injection given near an interference field. For example, the tonsil test produces almost 80% freedom from symptoms for 12 hours (++), injection to the adjacent wisdom tooth 3 days 100% (+). Repeated treatment shows with increasing success after each successive injection that the wisdom tooth is the interference field in question: ++, +++.

If the patient states that his or her disorder has worsened as a result of the treatment we have given, we need to wait and find out if this is a strong reaction for 2 to 3 days that disappears, after which the condition improves. Treatment helps when the injection is sited correctly, but if the site is wrong it will not do any harm. True worsening of the original complaint after segmental treatment is a strong indicator for an interference field instead of a problem in the segment. No doubt after an injection to the tonsils the patient feels as though he or she is starting a sore throat, and an injection into the periosteum may produce a sleepless night due to pain. But a severe reaction should not be regarded as being the same as a worsening of one's condition, and the neural therapist should on no account let it induce him or her to break off the injections. A severe reaction, for example, after an injection into the periosteum or the pelvic region, normally persists for only 2 or 3 days, and when it begins to wear off the old symptoms normally disappear with it. In our ledger, initial "worsening" followed by substantial improvement or freedom from symptoms is shown as follows: 00–(++) or +.

For instance, if a correctly executed tonsil test triggers (in exceptionally rare cases only!) a renewed attack of polyarthritis, this is known as an "inverted Huneke phenomenon." It proves that there is a causal relationship between tonsils and polyarthritis, but it also shows that the organism is reacting abnormally, a state of affairs that first needs to be altered by reversant measures, before further treatment of the tonsils is undertaken. Negative reactions are always extremely rare. It is always worth waiting to see whether what starts out as a negative reaction will not ultimately turn into a positive response. Such an initial worsening is not unknown to us, for example, in homeopathy. It is a sound principle that no physician should ever allow his or her patient to take control. A doctor who has once shown him or herself to be uncertain is someone in whom the patient can no longer place his or her full confidence.

The beginner may easily become confused by the wide range of possible injections available, some of which will doubtless be new to them. Obviously, we always start with the simplest injections that might be adequate for the case before us. In addition to the intravenous injection, which we use as the basic treatment, especially for all disorders affecting the upper half of the body, we normally use the proven quaddle therapy over painful, tender, itchy, or otherwise pathologically altered parts of the body. Often enough, the stimulus effect of these is enough to stop relatively minor pathological processes, and to arrest others in their initial stages and reverse them. If they do not suffice, we look for deeper-lying tissue within the segment that may show changes: subcutaneous tissue, muscles, tendons,

ligaments, bones, joints, pleura, peritoneum. The next step takes us to the afferent nerves and arteries. The most invasive intervention is the direct injection into the sympathetic system, by going for the sympathetic chain and its ganglia. But normally we always keep these injections to the last; never use a sledgehammer to crack a nut! The basic rule must be: always use the simplest means first, with small amounts of procaine and the minimum number of injections, but these must be accurately sited. The smallest healing stimulus that is only just enough to set off the change is the best and least risky.

We can only test suspect sites with procaine, and these we need first to seek out. We know that the effect of our individual injections can be proved objectively. But during our daily surgery sessions we need to depend on eliciting the reactions to our previous injections by questioning the patient. These questions have to be formulated precisely and purposefully, and we must insist on clear answers: Did they feel completely better, a little better, unchanged or worse after our last treatment? For how long was freedom from symptoms or the improvement maintained? Were the pain or the attacks less frequent or less severe? Was it possible to control them more easily with medication than before? Did a scar, a tooth, an old injury, or an organ make its presence felt that day or the next, i.e., has any pain appeared in any untreated part of the body? Everything should be recorded, including the weather (thunderstorm, weather change etc.) and personal details that can produce an additional strain on the autonomic system (death, divorce, period etc.).

We therefore need to take the time to talk to our patient and to let them talk to us. We should observe any gestures that they make, since they will often unconsciously show us by these where we ought to make a start. The patient will come to us accustomed to telling their doctor only a few of their symptoms before a quick diagnosis is made and a prescription written out. With us, however, they will first have to learn that they are not only allowed but expected to talk, and that we are dependent on their cooperation. They will gratefully note that we are prepared to give them all the time they need, that we take their comments seriously, and that, before reaching for the syringe, we examine and palpate them thoroughly. Every attempt to do a "2-minute-add-on-neural-therapy" is half-hearted and doomed to fail.

The real art consists in digging the right segmental possibilities out of the bewildering choice available and, if necessary, in combining them intelligently. What may simply seem to be a form of polypragmatism needs to be properly considered and purposeful, because it must be adapted as far as possible to the complex causality of the pathological processes we are confronted with, always provided, of course, that our theoretical ideas conform to the factual situation.

In acute cases, the intervals between treatments may be anything from 1 to several days, whilst in chronic cases, as a rule, they are initially about a week. These intervals have to be adjusted individually and increased once we have discovered which injections are effective and how long the patient has remained free from symptoms. Ultimately, it is the patient who determines when further treatment is required. They are instructed to let us know immediately if the old symptoms recur after a symptom-free period or become more severe. The longer they wait the more treatments will be required. With chronic patients whose general condition is reduced and whose stimulus threshold is low, we use small quantities, few injections, and longer intervals of up to 4 weeks.

Our therapy with local anesthetics can in principle be combined with other forms of therapy, such as manipulative treatment, acupuncture, homeopathy, physical medicine, and medication (with the exceptions as stated). To do this in every case and at once would, in my view, be mistaken, since to proceed in this way would make it impossible to recognize and identify clearly the causative processes at work, and the specific effects of any particular treatment given and of the injection site. One fact is certain—that other forms of therapy, including those based on medicaments, can often succeed only once an interference field has been eliminated. Interference fields can allow the control circuits to deviate to such an extent in the sense of positive feedback that normally successful methods of treatment must fail, regardless of whether they are based on medication, manipulative medicine, or whatever. Correctly sited local anesthetics can eliminate such interference fields and re-normalize the deviant control circuits to the point where they again respond normally.

8 Alphabetical List of Injection Techniques

Only some of the injection techniques used in neural therapy were developed by the Huneke brothers and their pupils. Others, such as the "blocks" of sympathetic ganglia, paravertebral injections to the trunk of segmental nerves, and peridural anesthesia, have been taken over from anesthesiology, orthopedia, and neurosurgery. We consider them part of neural therapy according to Huneke, like all methods that use local anesthetics for therapeutic purposes (and not for local anesthesia!).

Many of the techniques described here are used very frequently indeed, whilst others are employed only rarely. In order to indicate to those who are new to neural therapy the techniques they should master first and which they ought to concern themselves with particularly intensively, a star system has been used to mark the various injections:

* **of minor importance;**
** **important;**
*** **extremely important.**

It should be emphasized that these are not qualitative judgments! It may be the injection that has a lower classification that is alone capable of yielding results.

Quantities Stated

The quantities given in milliliters refer in each case to a suitable neural-therapeutic preparation of 1–2% procaine or 0.5–1% lidocaine solution without the addition of vasoconstrictors such as adrenalin, epinephrine, Suprarenin etc. If a number of different products are used during a single session, the toxicity of the individual preparations and the maximum permissible doses stated must, of course, be observed!

Adenoids → (T) tonsils.

Afferent Arteries

After the World War I the successes achieved by surgery of the sympathetic chain (Leriche) attracted considerable attention. Surgical removal of the nerve reticulum surrounding the arteries produced vasodilation in the periphery of the area supplied by them. In a number of cases, such surgery was able to deal successfully with extremely severe circulatory disturbances with threatening necrosis. But in the end the surgeons that specialized in work on the sympathetic chain discovered for themselves that para-arterial injections of procaine produced much the same effect as sympathectomy, as a result of which they abandoned surgery in most cases in favor of injection, described by Leriche as the "surgeon's bloodless knife." The procaine injections also have the advantage of being repeatable as often as necessary and cause no permanent damage to

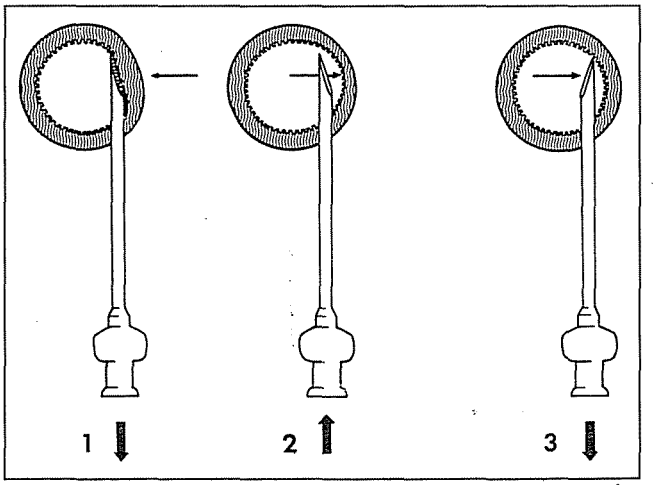


Fig. 3.2 **Aspiration in two directions before injections in the head and neck area.**

1. The tip of the needle is positioned close to the interior wall of the artery. Blood is not drawn into the syringe, in spite of the intravasal position of the needle, because the internal artery wall is sucked against the opening of the needle.
2. If injection takes place at this point, the arterial wall is pushed away and the local anesthetic is injected intra-arterially, in spite of a negative aspiration test!
3. If the needle is rotated 180° and a second aspiration takes place, blood will be drawn into the syringe. This reveals the intravasal position of the needle and unintended intra-arterial injection is prevented.
4. The small quantities used in neural therapy (low concentration solutions without additives), are unlikely to cause serious complications, even in the case of intra-arterial injection. An additional safety measure in the area of the head and neck is the injection of a small fraction of the intended amount near the carotid artery and the vertebral artery. If the patient does not display any adverse reactions after a short while, the entire quantity can be injected.

the nervous system, because they neither have a trigger effect in Speransky's sense, nor do they leave an interference field behind. The effectiveness of para-arterial procaine or lidocaine injections can only be explained if we accept that the neural-therapeutic preparation acts as a regulating stimulus on the sympathetic periarterial tissue reticulum and thus restores the blood supply and other dysregulations to normality. Their ultimate therapeutic effect is similar to that of injections to the → (T) nerves (afferent).

Care must be taken to avoid injections into arteries supplying blood to the brain and leading cranially from the heart, since such injections can produce dangerous complications. Always aspirate to make certain (see Fig. 3.**2**)! This precaution must continue to be recommended in practice, although recent clinical experience has shown that the risk involved in an accidental procaine injection into the carotid artery is not as great as was originally assumed. Before Huneke, pharmacologists prophesied fatalities following intravenous injections of procaine; they then warned against injections into the carotid; now they are equally vocal in their objections to the → (T) cisternal injection according to Reid. In the Soviet Union, procaine injections directly into the carotid have been used for years in order to produce a direct therapeutic effect on the brain. Doronin injected 10 mL of a 0.25 % procaine solution directly into the carotid artery of 150 patients with skull/brain injuries. Only four patients died after this injection, and these had already been in a terminal state when admitted.

In animal experiments it has been found that the intra-arterial procaine injection into the carotid seals off the focus of traumatic brain damage so that pathological reflex effects on undamaged parts of the brain are prevented and functionally blocked brain cells are reactivated. The effect of this is positive not only as regards the brain itself but also on the organism as a whole. Nambiar gave 400 hemiplegic patients 10 mL of a 1 % procaine solution into the carotid and reported good-to-satisfactory results, without a single fatality.

The theory-based fear that damage will occur to the vascular walls if an artery is perforated repeatedly is not borne out by fact. In a total of 6000 patients suffering from vascular disease, Loose reported that he had in some cases injected 100 times into the same site in an artery without witnessing any serious incidents. Even fairly severely sclerosed arteries are still sufficiently elastic to close the injection canal. So, for example, in the case of diabetic gangrene, it is possible to inject into the femoral artery once or twice a day. In advanced obliterant arteriopathy, intra-arterial injections form the most effective conservative therapy and do not present any special risk (Alexander).

From the effects of intravascular injections, both intra-arterial and intravenous, we can conclude that the local anesthetic injected is capable of eliminating autonomic control defects involving the blood vessels and the areas supplied by them.

Overview

Injections into the following arteries will be discussed over the next few pages:

1. temporal artery, p. 290;
2. carotid artery, p. 290;
3. aortic plexus, p. 291;
4. vertebral artery, p. 292;
5. subclavian artery, p. 293;
6. brachial artery, p. 293;
7. femoral artery, p. 293;
8. posterior tibial artery, p. 294.

1. Temporal Artery*

The superficial temporal artery is a terminal branch of the external carotid artery. It can be palpated easily as it pulsates subcutaneously anterior to the ear. For temporal arteritis and migraine, Leriche recommended infiltration around the temporal, facial, and occipital arteries. We also infiltrate around the artery with 2 mL in the case of headache, impaired cerebral blood flow, and conditions following apoplexia. An intra-arterial injection into the temporal artery by mistake is generally harmless, since this artery supplies only the periphery and does not lead to the brain. However, it can become dangerous if larger amounts of a local anesthetic are injected with high plunger pressure. A backup into the area of the internal carotid artery could transport procaine into that artery, where it could cause complications. Accounts of this occurrence can be found in the literature. Under the same circumstances, blockage of the internal carotid artery can cause the blood to return into the skull through existing anastomoses from the terminal branches of the superficial temporal and facial artery to the terminal branches of the supraorbital artery. In the head and neck area, particularly when we know of a blockage of the internal carotid artery, we will always inject slowly, after aspiration, and only small amounts of procaine to (not into) the temporal artery.

2. Carotid Artery (Carotid Body)*

Para-arterial injections only!

Alternative terminology Anesthesia of the carotid body, carotid sinus block.

Anatomy and function The carotid body lies in the bifurcation of the common carotid artery. It belongs to the parasympathetic paraganglia. These are organ-like formations, which act as sensors for the control of vasodilation and the reduction of blood pressure (pressoreceptors), which function with the regulator in the medulla oblongata. In addition, it

also possesses chemoreceptors, i.e., sensors that react to chemical stimuli, which keep the blood's oxygen content constant. When the carbon dioxide level of the blood rises, the regulating respiratory center is stimulated to reduce the carbon dioxide level again by increasing the respiratory rate. It is thus an important control center for circulation, oxygen supply, and respiration. Three important nerve branches start here, one to the glossopharyngeal nerve, another to the vagus nerve, and the third to the upper cervical ganglion. Pressure due to strangling or a blow to the point where the common carotid divides can produce the carotid-sinus reflex, resulting in vasodilation, especially in the lower abdomen, and in slowing the pulse, and is even capable of causing cardiac arrest.

Indications These are given by the carotid body's influence on cardiac, vasomotor, and cerebral regulatory control centers. This explains, for example, the effectiveness of this injection in the prophylaxis and therapy of traumatic and post-operative shock with vasomotor collapse. This success is possible even when other therapeutic measures fail. In intestinal infarction it restores the balance in the diencephalic center of capillary regulation. It should also be tried in cerebral disturbances, lung disorders, disturbances in the conduction system of the heart, Ménière disease, therapy-resistant forms of headache, and in eye disorders where access is difficult, such as glaucoma, ophthalmic herpes zoster, painful disorders of the cornea, and others that have failed to respond to other attempts at treatment.

Carotodynia → neuralgia.

Materials Size 1 × 40 mm-long needle.

Quantity 1 mL.

Technique The injection is not difficult, but it must be carried out with the appropriate care. The patient lies on his or her back and turns the head slightly towards the side opposite to the injection site. The bifurcation of the carotid is at the level of the upper edge of the thyroid cartilage, where it can be readily identified by its easily palpable pulse. We fix the artery by pressure (not too hard!) and insert the needle vertically (without the syringe) so that when the needle is released it vibrates in time with the pulse rhythm. The assistant now carefully attaches the syringe and aspirates to check that it is still extravasal. If no blood is aspirated, we very slowly inject only about 1 mL of the solution immediately next to the carotid artery. Rapid injection or an excessive quantity, such as the 10 mL used by others, could be fatal! The injection must never be given bilaterally. After the injection, check the patient's blood pressure. If the blood pressure decreases considerably and a carotid sinus reflex, caused by cranial ischemia, occurs, immediately place the patient into the Trendelenburg's position (head slightly lowered, pelvis and legs elevated), which will normalize the blood pressure quickly and without medication (Koster, Kasman).

3. Aortic Plexus*

Para-arterial injections only!

In neural therapy according to Huneke, the injection to "Arnulf's pre-aortic plexus" is hardly ever used. In angina pectoris, as a rule, we manage perfectly well with segmental therapy using appropriate quaddles and anesthesia of the stellate ganglion. According to Leriche, the injection to the stellate ganglion has about the same effect as that to the aortic plexus. But since the latter also forms part of the therapies using local anesthetics, it must be mentioned here.

Anatomy This plexus innervates the coronary vessels. It is located in front of the aortic arch and consists of nerve fibers of the cervical sympathetic system and of the vagus. By blocking its action, the coronary vessels are dilated.

Indications Angina pectoris, precordial pain in aortitis, myocardial infarct.

Materials 0.9 mm × 100–120 mm-long needle.

Quantity In the original method, 20 mL of 1 % procaine solution was used, but 5 mL should do equally well.

Technique In the technique described by Arnulf in 1940, the patient is in a half-sitting posture, with his or her head laid back and turned slightly to the right. The needle is inserted through a quaddle 20 mm above and 20 mm laterally from the left sternoclavicular joint. It is guided behind the sternum, parallel with it and about 70–80 mm obliquely down toward the interior (approximately toward the center of the sternum). It is now in front of the aortic arch, immediately next to the point where the aorta leaves the heart. The aortic pulse is transmitted to the needle. The needle is not advanced beyond this point, and the anesthetic is injected slowly after aspiration proves negative.

When 20 mL are injected (but not with 5 mL), the patient feels a heaviness behind the sternum, but this disappears rapidly. Any aphonia due to anesthesia of the recurrent nerve disappears as the anesthetic effect wears off. If this method is used there is no risk of injury to pleura, brachiocephalic (anonymous) vein, or aorta. If, exceptionally, the anonyma should be injured, apply pressure with a finger or pad in the hollow above and behind the clavicle. If the needle accidentally punctures the aorta, this does not matter (as in aortography). If necessary, the injection may be repeated three to four times weekly. Its effect will increase until it becomes permanent.

4. Vertebral Artery**

Para-arterial injections only!

Anatomy The vertebral artery runs cranially through the transverse foramina from the sixth cervical vertebra. Between axis and atlas it turns aside to the transverse foramen of the atlas, which lies further laterally. Above the atlas it again runs medially in a sulcus and penetrates the atlanto-occipital membrane and the dura mater. It then passes through the foramen magnum into the cranial cavity where it unites with the vertebral artery of the other side and becomes the basilar artery. The sympathetic supply of this artery is provided by the vertebral nerve of the stellate ganglion and by fibers of the upper cervical ganglion. The cranial nerves IX and X provide it with its parasympathetic fibers. The regions supplied by this artery are: spinal cord, pons, labyrinth, cerebellum, occipital lobe, basal portion of temporal lobe, midbrain.

Indications Vertebral-artery syndrome, sudden syncope with brief loss of consciousness and crumpling of the legs, therapy-resistant forms of migraine and cervical migraine, positional vertigo with or without nausea; nausea, vomiting, and tinnitus, Ménière, upper cervical syndrome, conditions following → whiplash syndrome and other trauma in the area of the cervical spine, shoulder pains, ataxic locomotor and static disturbances, nystagmus, visual disturbances with loss of visual field; hazy, cloudy, or distorted vision. Scheffel took the view that anesthesia of the vertebral artery could be used instead of anesthesia of the stellate ganglion and listed further indications: multiple sclerosis, post-apoplectic state, facial paresis, hiccoughs, tinnitus, glaucoma, and bronchial asthma.

Materials 40 mm-long needle.

Quantity 1–2 mL.

Technique

a. The neural therapist Auch described an injection technique to the posterocaudal surface of the lateral part of the atlas arch. With this, it is possible to reach the vertical and horizontal portions of the vertebral artery, and the suboccipital, second cervical and greater occipital nerves.

The patient sits with head bent slightly forward. The injection must not be given unless the site to be infiltrated, i.e., the lateral side of the atlas arch and its posterocaudal surface, can be palpated with absolute certainty. The point of entry is about half to one fingers' breadth below

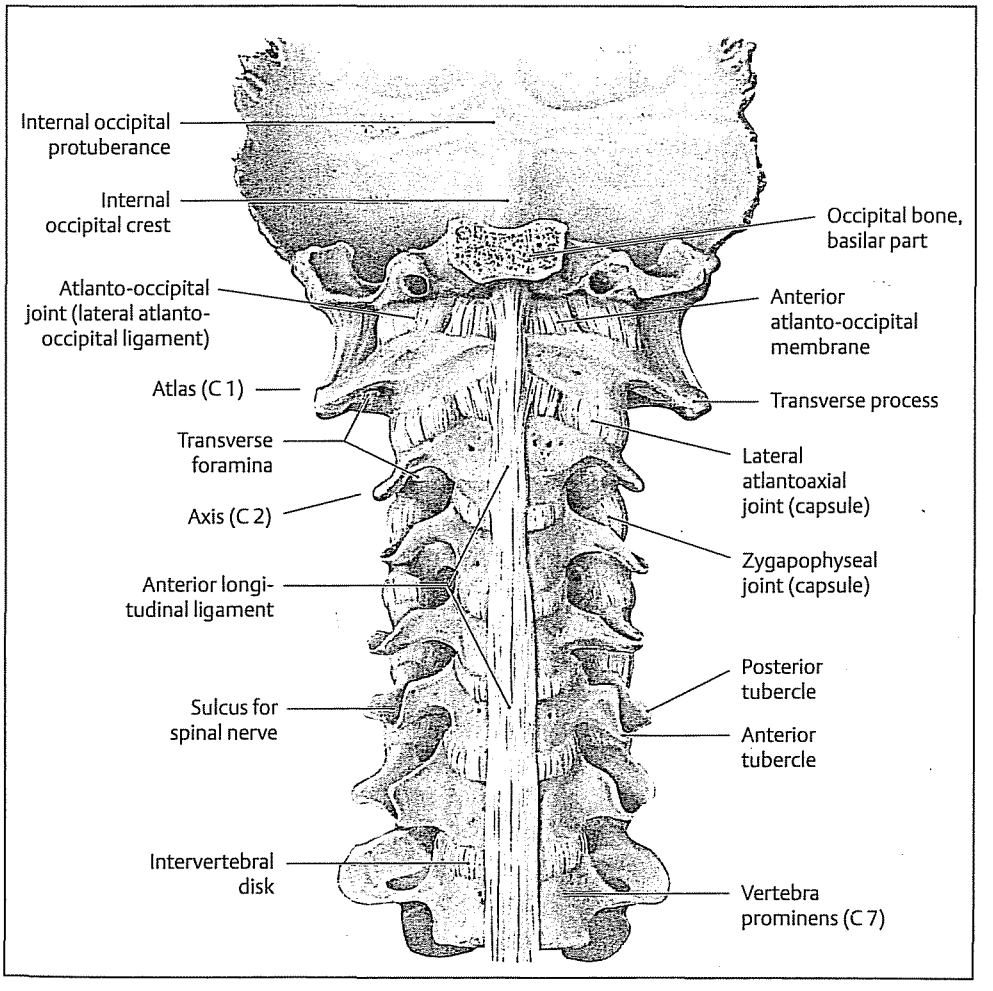


Fig. 3.3 Injection to the vertebral artery.

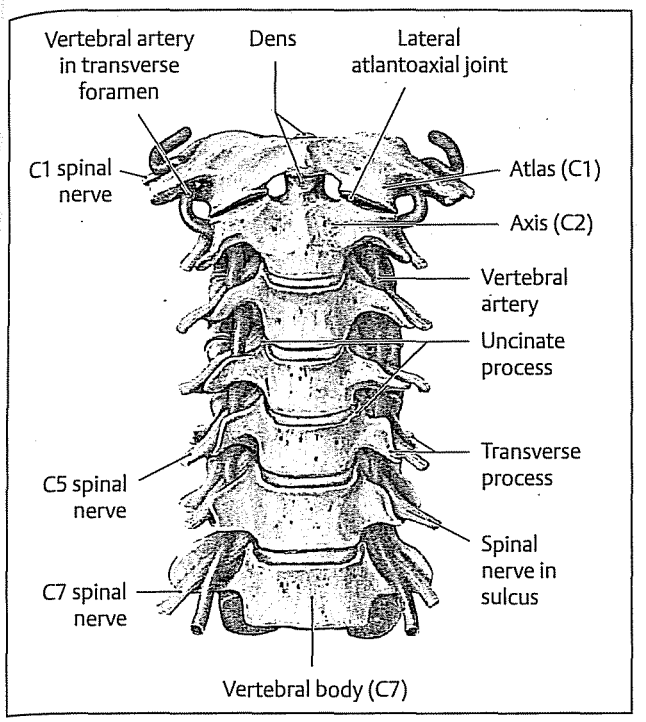


Fig. 3.4 The injection site on the lower lateral arch of the atlas vertebra.

and about one to two fingers' breadths medially of the mastoid process, generally at the medial edge of the sternocleidomastoid muscle, but this muscle often has to be pushed slightly aside in a lateral direction. The direction of the needle is slightly craniomedial. The injection depth is about 10–20 mm and the local anesthetic is injected after a negative aspiration test. The patient should remain recumbent for 15–20 minutes after the injection. (see Figs. 3.**3**, 3.**4**).

b. Scheffel goes in a little further caudally, about two to three fingers' breadths below the mastoid where the lateral process of the axis (epistropheus) can be felt at the posterior edge of the sternocleidomastoid muscle. After aspiration, inject 2–3 mL at a depth of about 15–20 mm at the dorsal portion of the epistropheus.

Thus, both these authors go into the space between atlas and axis, Auch further cranially to the lower surface of the lateral atlas arch, Scheffel to the upper edge of the axis. In their end effect these two methods are identical.

c. A third possible method of reaching the sympathetic reticulum surrounding the vertebral artery is to place a depot of 2 mL in front of the artery's entry point into the vertebral canal in the lateral process of the (fifth or) sixth cervical vertebra. This can be easily found by palpation and is reached without difficulty from the front or side.

d. Post-ganglionic fibers travel directly from the stellate ganglion (cervicothoracicum) to the adventitial plexus of the subclavian artery. The vertebral artery can be affected through anesthesia of the stellate ganglion or perivasal injections around the subclavian artery. This way, the areas of the posterior skull sulcus and the inner ear can also be treated.

Possible complications According to Schmitt, accidental injection into the vertebral artery produces lightning-like flashing sensations in the homolateral eye, and tinnitus and hammering in the homolateral ear. A slightly comatose state disappeared after about a minute without subsequent symptoms.

5. Subclavian Artery*

Para-arterial injections only!

Indications and technique are obvious from what has been stated above and from the description of the injection to the brachial plexus (see → (T) nerves, afferent). Periarterial nerve plexuses travel from the stellate ganglion to the subclavian artery at the same location where the vertebral artery branches off. This is why Dittmar recommended the perivasal infiltration of the subclavian artery instead of the injection to the stellate ganglion for improving the peripheral blood supply and reducing hypertonicity of the body's musculature in the region supplied by this vessel, particularly in stenocardia and in functional and organic cerebral circulatory disturbances. Because of the nearness of the cervical pleura, the needle must on no account penetrate beyond 15 mm! See also → scalene syndrome.

6. Brachial Artery*

Intra- and Para-arterial Injections

Indications Circulatory disturbances, support for the healing of fractures, injuries, burns, or congelation of the upper extremities and post-traumatic pain, nocturnal arm dysesthesias, arm plexus neuritis, Sudeck's dystrophy, arterial emboly, acroparesthesias, causalgias, amputation/phantom pain, epicondylitis, styloiditis, tendovaginitis. If it is not possible to give an intravenous injection in small children, e.g., in otitis media, we inject to the brachial artery.

Materials Size 2 needle.

Quantity 1 mL.

Technique The brachial artery is found by palpation above the antecubital fossa and the procaine is distributed in its immediate vicinity. There is absolutely no risk attached to an intra-arterial injection into this vessel, since it leads only to the periphery. Also, perineural injection to the radial, ulnar, median, and musculocutaneous nerves will improve the treatment.

7. Femoral Artery***

Indications All kinds of circulatory disturbances affecting the lower extremities, including arterial occlusion disorders (arteriosclerotic and diabetic gan-

grene) and varicose ulcer; also in nocturnal cramps in the calves, phlebitis, post-thrombotic conditions, angiospastic dysbasia, and impotence. After giving procaine for the above indications, we also like to administer an ozone-oxygen mixture: cellulose pad, hold needle firmly, arrange for assistant to change syringes quickly.

This injection is also used in tuberculosis of the bone or joints of the lower extremities (in addition to the usual measures), in order to improve tissue nutrition and thus improving the body's natural defenses against the tubercle bacillus. Dittmar pointed out that perivasal injection to the femoral artery not only stimulates the blood supply to the regions supplied by this artery and relaxes reflex muscular hypertonicity, but that via the "transition segment" L2 it also develops a therapeutic effect on the lower portion of the large intestine and the whole of the urogenital system.

When injecting procaine intra-arterially, followed by insufflation of an ozone-oxygen mix, it becomes noticeable that the increase of blood supply is extended beyond the injection site, in direction of the blood flow. After the infiltration, a vascular spasm occurs and the extremity turns pale and cold. Now the reactive vasodilation takes place. At first, hyperemic red spots appear on the skin, they begin to connect and turn the entire skin red along the vascular area. Cranially the hyperemia extends in direction of the blood flow to the umbilical level! This explains the effectiveness of the injections with → impotence (Leriche syndrome).

In the course of treatment of the lower extremities, it can be measured that the area of blood supply disturbance moves distally. This shows that a collateral circulation has formed and regulates the blood supply.

Materials About a 40 mm-long needle, not too thin.

Quantity 2–3 mL. In an emergency, it is also possible to mix the local anesthetic with Priscol, Ronicol, Actihaemyl, or similar.

Technique The patient lies on the examination couch, the legs opened slightly and rotated outward. The femoral artery is now immediately below the inguinal ligament in the fossa ovalis and can be readily found by palpation. The vein lies in a medial direction from it and the femoral nerve lies further laterally. Fix the pulsating artery between the tips of the index and middle fingers. The right hand guides the needle with a short jab almost vertically into the vessel. Aspiration is only very rarely necessary, since blood pulsating into the syringe under its own pressure usually shows when the needle is in the correct position. About 2 mL of procaine are now injected rapidly into the artery. On withdrawing the point of the needle, another 1 mL is given into the immediate vicinity of the artery. For the femoral artery, the intra- and periarterial injections are combined in order to reach the sympathetic fibers of the adventitia, the media, and the intima, i.e., the whole of the sympathetic reticulum of the artery, which is co-responsible for pathological vasoconstriction and other disturbances. The injection site should be kept compressed for a few minutes after the injection, using a pad, in order to prevent the formation of a hematoma.

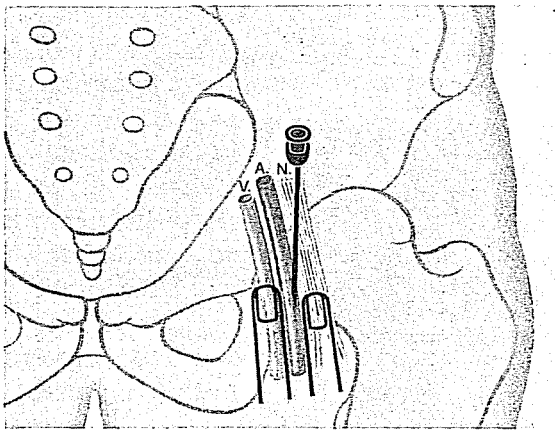


Fig. 3.5 Injection to and into the femoral artery.

The vascular wall is not damaged even if the intra-arterial injection has to be repeated several times. If dark venous blood is aspirated, the needle has been placed too far medially; and if the patient feels an electric flash going down the leg, it is too far laterally and in the femoral nerve (mnemonic IVAN: inside, vein, artery, nerve). Also refer to Fig. 3.**17**. After the infiltration, the patient perceives a pleasant sensation of warmth in the affected extremity, sometimes in the entire body. Patient and practitioner can recognize the improvement of the dysbasias by the expansion of the distance that the patient can walk without discomfort. (See Fig. 3.**5**.)

The fossa ovalis is subcutaneous and quite near this is the cribriform fascia, a membrane with perforations rather like a sieve. Here there is a large mass of lymphatic and blood vessels, accompanied by a thick reticulum of autonomic fibers. It is palpable as a depression in the subcutaneous tissue. Due to an accumulation of receptors, this is an important site for producing distant reactions. We therefore like to inject a few drops subcutaneously into this area. These should be distributed by short circular massaging movements.

8. Posterior Tibial Artery*

Indications Acupuncture has recommended this artery to us for ancillary treatment of disorders affecting the hip and knee joints, the urogenital system, in

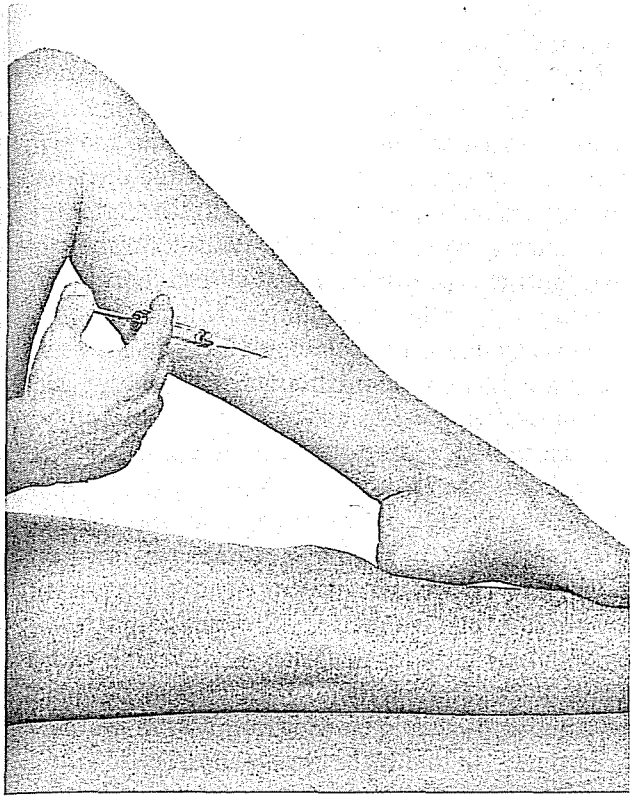


Fig. 3.6 Injection to the posterior tibial artery.

circulatory disturbances affecting the legs, and particularly for menstrual disturbances.

Materials Size 1 needle or longer.

Quantity 1 mL procaine solution.

Technique Entry on the inside of the tibia below the calf. Insert the needle as far as the vessel, i.e., until the patient feels a dull pain. Before withdrawal, also give a few drops para-arterially. (See Fig. 3.6.)

Autohemotherapy***

Reversant therapies gain importance in light of the increasing number of patients with regulation disorders or regulation blocks. In addition, the growing interest in biological healing methods has brought the attention of patients and physicians back to autohemotherapy. It can be recommended as a simple and harmless addition to the repertoire of every neural therapist. It can improve the patients own → immune response and vegetative constitution. Some therapy-resistant disorders cause autosensitization through morbific agents or other factors (e.g., metabolic waste, mercury fillings). Often, the irritants cannot be identified and the number of allergens is growing by the day. Specific desensitization can take place only if the irritants that affect the autonomic basic system are recognized and turned into allergen extracts.

The patients' blood definitely contains all sensitizing substances. Autohemotherapy makes use of the specific antibodies formed by the patients' immune system and the information resulting from previous therapies. Thus, it is more than merely parenteral protein therapy. During hemolysis, antibodies specific to the individual are released. The products of this decomposition stimulate the immune system and increase humoral and cellular defense mechanisms. For example, erythrocatalysis stimulates increased blood formation in the bone marrow, the cytolysis of leukocytes releases immunoglobulins. Stimulation of the storage activity of the reticuloendothelial system (RES) and cell activation has been documented. More phagocytes are produced and the functions of the spleen, lymph nodes, and tonsils are stimulated. It is presumed that the allergen antibodies are processed as a form of countersensitization. All this signifies profound reversal of the autonomic constitution and reactivation of inhibited self-healing abilities.

Indications General reversal, furunculosis, carbuncle, pyodermia, acne and other skin disorders, chronic diseases of the respiratory tract, allergies, rheumatism, joint disorders, ulcerative colitis, ventricular ulcer, cerebral sclerosis, and more.

Technique Initially, 1–2 mL of blood is taken from the patient's cubital vein and intramuscularly re-injected immediately. Every 2–3 days the amount is increased by 0.5–1 mL, depending on the patient. In the course of the next 2–3 weeks the amount cannot exceed the → fever threshold of 5–8 mL. The patient has to be informed that he or she might experience a febrile healing response for 1–2 hours, which will disappear by itself. Usually the patient does not require sick leave but should also be made aware that interference fields can be activated and that he or she needs to report every reaction to the physician. In order to increase the therapeutic effect, it does not cause harm to add biological substances that stimulate the immune system, such as Elpimed, Echinacin, Engystol, etc.

The same applies to ozone-autohemotherapy, where an ozone-oxygen mixture is added and in smaller amounts re-injected; in larger amounts (50–100 mL) it is reinfused after adding citrate. There are additional therapies, including the modified autohemotherapy according to Theurer, hematogenous oxidation therapy, and the use of blood that has been potentiated or treated with ultraviolet radiation or hemolysis.

Cerebrospinal-fluid Pump (CSF Pump) According to Speransky*

This radical reversant method should probably be used only as in-patient hospital treatment, since extensive irritation can result.

Indications: This light cerebral massage leads to central nervous stimulation and to penetration of the blood/liquor barrier, which normally ensures that drugs circulating in the blood will not pass into the liquor. This unspecific thrust into the nervous system makes it possible to stop pathological processes and to change the reaction of the nervous system in such a way that drugs that were previously no longer producing any results again become effective. We assume that fever therapy, hot baths, shortwave therapy, and → (T) Ponndorf's vaccinations produce a similar stimulating effect, but in a less radical form. Speransky and those who verified his work found this method very suitable for treating a whole series of disorders: polyarthritis, epilepsy, asthma, chorea minor, neurasthenia, post-diphtheritic paralysis, post-traumatic psychosis, pulmonary gangrene etc. Whether the CSF pump is also able to stimulate the organism where an illness has become autonomous or the regulating mechanisms are blocked, to enable procaine to act on the original interference field again, still awaits clinical investigation. It is perfectly possible that this means will open a new field of action for procaine. The other question that also needs to be clarified is whether Reid's → (T) cisternal procaine injection is not a substitute for the somewhat heroic CSF pump.

Materials Lumbar-puncture needle with mandrin or 0.8 mm diameter × 80 mm-long needle, 10 mL record syringe.

Amounts We slowly inject 1 mL of 1 % procaine solution from an ampoule without additives intrathecally into the liquor at the end of the pump operation. Before this, to avoid excessive irritation to the liquor-forming system, we first draw off about 8–10 mL of liquor. In the original method, only the liquor itself was pumped back and forth without the addition of procaine.

Contraindications Hypertension, tumors in the posterior cranial fossa, central vascular disorders.

Technique Absolute sterility is essential: disinfection of the skin, sterile surgical gloves.

Lumbar puncture The patient sits astride a stool. His or her head is held firmly by an assistant, bent slightly forward. Preferably, the patient should put his or her arms around the assistant. The needle is inserted between the spinous processes of the third and fourth lumbar vertebrae at the point of intersection of the line connecting the iliac crests with that of the spinous processes. A → (T) quaddle is set over the point of entry and the needle is then guided first straight ahead and then its point should continue slightly upwards and in a perfectly sagittal direction until it meets an elastic resistance. When it has passed through this, the cannula is in the correct position and liquor will drip from the needle. The needle is left in position and the syringe attached to it. Liquor is now aspirated into the syringe and the 10 mL of liquor is re-injected. The process is repeated 10 to 20 times, so that a total of 100–200 mL of liquor is moved.

Side-effects Headache, vomiting, nausea. These symptoms can to some extent be controlled with analgesics. The removal of a quantity of liquor at the end of the treatment can considerably reduce these side-effect symptoms. Years ago, I was able to cure a woman of flaccid paralysis of both legs, which had persisted for 2 years, by means of three such liquor-pump treatments with the addition of 1 mL of Impletol, at intervals of 3 weeks. On each occasion I removed 10 mL of liquor as a prophylactic measure to relieve pressure.

Cisternal Procaine Injection According to Reid*

Caution: *Indications* This method is not suitable for general practice! It should be used only by the experienced physician and if the possibility of in-patient treatment is available. It must never be used unless segmental therapy and the search for a possible interference field have proved fruitless and even then only if there is a sufficient number of subjective and objective symptoms suggesting a possible interference field in the cerebral region. Obviously, the principle that the seriousness of the clinical picture must always be in a proper relationship to the risk attached to the therapeutic intervention also applies to this injection. In the case of a cisternal injection, the risk resides less in the injection of procaine as such than in the suboccipital puncture it necessitates.

The percentage of cures due exclusively to treatment based on this diagnostic procedure is certainly not very high. Nevertheless, the risk attached to a diagnostic suboccipital puncture seems a reasonable one to take. Before Huneke, pharmacologists prophesied that fatalities would result from the intravenous administration of procaine. Today, no one thinks of this and the extensive literature on the intravenous procaine injection unanimously praises its many-sided therapeutic effect. I am therefore prepared to prophesy that the same will be the case with regard to the cisternal injection of procaine, and that it will gain a firm place in therapy once the theoretical doubts and its own inevitable teething troubles have been overcome (Case Histories 16–18, Part I, Section C). In the case of severe systemic disease, organic cerebral damage with loss of tissue, cerebral atrophy, multiple sclerosis, amyotrophic lateral sclerosis, and pyramidal signs (positive Babinski reflex), the therapy is without prospect.

Subjective signs The term "central stress" is used for the various types of consequences resulting from encephalitis due to the influenza virus, chronic latent encephalomyelitis or of some other degenerative cerebral process. Orthodox medicine has a wide variety of diagnoses for the dysfunctions due to these, but they hardly merit the name of diagnoses since they tell us nothing about the pathological causes for these symptoms. Thus, for example, we may find any of the following to be due to an interference field in the brain: depression, neurasthenia, autonomic dystonia, chronic headache with or without dizziness, inability to go to sleep at night and sleepiness during the day, bronchial asthma, vasomotor angina pectoris, nocturnal paresthetic brachialgia; unilateral dysfunctions such as the shoulder–arm and lumbar syndrome in osteochondrosis, arthrosis deformans and other forms of arthritic pain, spastic torticollis, trigeminal neuralgia, circulatory disturbances, partial deafness, psychasthenia, neuroses etc.

Objective symptoms:

- Positive Romberg test.
- Impaired ocular convergence.
- Dysmetria (signs of ataxia, finger-nose test).
- Snout reflex according to Wartenberg ("the Babinski of the head"): the reflex is positive, if when tapped with a reflex hammer the loosely held lips are arched forward like a snout.
- Eye test according to Reid: the patient faces straight ahead and his or her eyes follow the physician's finger moving to the extremities of vision to the left, right, up, and down. The reflex is positive, if a fine tremor of the head results, which may be accompanied by dizziness or nausea.
- Wartenberg's head-retraction reflex: the patient bends his or her head slightly forward. The reflex is positive if the head is briefly retracted when the upper lip is tapped with the reflex hammer.
- Other pathological reflexes, e.g., absence of the abdominal-wall reflexes.

If several such signs are present simultaneously, the cisternal injection is justified.

Anatomy The cistern is the cavity between the pia mater and the arachnoid. It is filled with liquor and opens into the fourth ventricle and, indirectly, the entire ventricular system. Almost all the cerebral nerve centers lie in the rhomboid fossa, on the floor of the fourth ventricle, including the autonomic centers of the vagus, the glossopharyngeal and the intermedius nerves. They are particularly important for respiration and circulation. By way of the cerebral aqueduct, the fourth ventricle communicates with the third ventricle of the diencephalon. There is also an indirect connection from there to the pituitary gland. The "pituitary-diencephalon-system" comprises the primary center for autonomic regulations.

Materials The needle should preferably be a suboccipital-puncture needle with a mandrin, or a normal 1 mm diameter × 80 mm-long needle; in addition, an empty 10 mL syringe and a 5 mL syringe containing 1 mL procaine will also be required.

Technique If possible, the patient should have an empty stomach. He or she is seated backwards astride a chair, and supports their head on their folded arms resting on the back of the chair. An assistant firmly holds the patient's head bent forward to prevent it from jerking back. The hair is cut away over the suboccipital site, between the spinous process of the second cervical vertebra, which can be readily found by palpation, and the squamous part of the occipital bone. The area around the site is cleaned with soap and water and thoroughly disinfected.

The needle is inserted (see Fig. 3.**7**) above the spinous process of the second cervical vertebra, one to two fingers' breadths below the squamous part of the occipital bone, at first exactly in the sagittal plane. It is then directed obliquely upwards through the nuchal ligament until its point reaches the lower edge of the squamous part of the occipital bone and should just be able to slide through under this. At a depth of about 70 mm, the elastic resistance of the atlanto-occipital ligament can be felt. After passing through this membrane, the needle must not penetrate more than 5 mm into the cistern, lest the medulla be punctured! A lesion to the center for respiration will most likely cause sudden death. To make certain that the sudden jerk following penetration of the membrane can be halted at once, the physician places his or her right hand flat

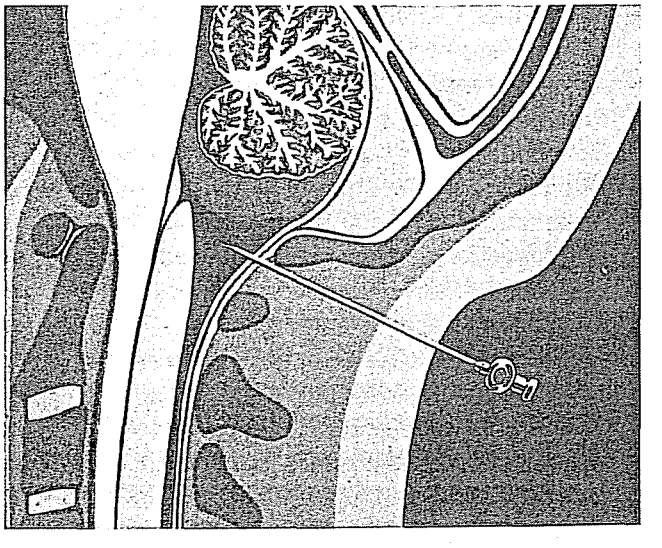


Fig. 3.**7** Injection into the cistern.

on the back of the patient's head and his or her left on the haft of the needle in such a way that it acts as a brake.

The mandrin is now removed. If liquor flows into the syringe under pressure, this can be regarded as evidence of a lesion that is likely to respond to our treatment. If the site of the needle is correct, the outflowing liquor should contain no blood. About 10 mL of liquor are removed and the 5 mL syringe containing 1 mL of procaine is then attached and filled to the limit with liquor. This mixture of procaine and liquor is then injected into the cisternal cavity without undue delay. The needle is now withdrawn quickly and a sterile pad attached with adhesive tape over the injection site. The patient is immediately laid flat, with a cushion under the neck.

Before the injection, the patient should be warned of a number of reactions, some of which may be unpleasant, and the physician should remain with him or her for 20–30 minutes until they have subsided. Soon after the injection, the patient's pulse rate will rise and he or she will feel nausea. This will be followed by a sensation of warmth and an outbreak of sweating. There may also be coughing, sneezing, or violent yawning, and hallucinations of taste or smell may occur. Following this reaction of the sympathetic nervous system there will be a parasympathetic phase with a slowing of the pulse, pallor, a feeling of cold and nausea.

In case of severe decrease of blood pressure, Trendelenburg's positioning (head slightly lowered, pelvis and legs elevated), which normalizes blood pressure quicker and more reliably than short-acting analeptics, should be used. Due to the concentration and amounts used in neural therapy, a paralysis of the respiratory center is improbable. According to the Americans Koster and Kasman, the respiration center possesses characteristics that make it insensitive to the amounts of local anesthetics used in spinal anesthesia. Depending on the autonomic state at the outset, the type, severity, and duration of these autonomic reactions may vary. They disappear after anything from a few minutes to 30 minutes, when the patient's equilibrium is restored to normal. Sometimes this injection can be given with hardly any reactive symptoms by the patient, at other times the same patient may present with severe, even excessive reactions. But no case of damage or fatal sequelae has been reported.

Following the injection, the patient should remain recumbent and under the physician's observation for at least an hour and should not be discharged except under observation. If possible, he or she should rest in bed for a couple of days. For these reasons, in-patient treatment is desirable. If, during this period, there are symptoms of meningeal irritation such as a rise of temperature, headache, and a hint of a stiff neck, the prescription of analgesic suppositories is all that will be required.

Theoretical doubts have been voiced against the cisternal injection of procaine, some of them very weighty indeed (Janzen, Lendle, Moellhoff, Zipf) and, as a result, the Federal German Medical Association has issued a warning against using this injection. Lendle issued a massive threat by stating that "in case of accidents, a person who has used this form of therapy cannot expect to find any grounds based on theoretical and pharmacological considerations to relieve him of responsibility." He regards it as theoretically impossible that 1 mL of procaine injected into the cistern will not produce paralysis of the respiratory center, collapse, etc. Against this, however, there is the fact that in practice, involving several hundred such injections, there has never been a serious incident, much less a fatality; there have, on the other hand, been cures that could not be previously obtained by any other means. If theoretical objections had always carried the day in the past, there would never have been such things as railways, airplanes, or nuclear reactors, not to mention a large number of surgical operations.

The risk of the cisternal injection lies entirely in the suboccipital puncture, in which one cannot, of course, ever be absolutely certain that there will be no complications as a result of cerebellar tumors and vascular abnormalities. Nevertheless, in neurology it is carried out for purely diagnostic purposes as an almost daily routine and with little hesitation. The introduction of procaine into the cistern does not in our experience constitute any significant additional risk. Nonetheless, it is advisable always to have a cortisone preparation in readiness for intravenous administration in case of shock or collapse, such as Solu-Decortin H or Ultracorten H (water-soluble).

Epidural (Lower) or Caudal Anesthesia***

Alternative terminology Extradural, peridural, or sacral anesthesia, caudal block.

Anatomy The injection into the sacral canal from the sacral hiatus reaches the epidural region (epidural space, also called extradural or peridural space), which extends superiorly to the foramen magnum, which the dura is attached top. A connection to the liquor-containing space does not exist! The epidural region is located between vertebral canal and dura, and surrounds the dural sheath down to the second sacral vertebra, where the dural sheath ends. From this point caudally, it only contains (in addition to

the external filum terminale, which attaches the dural sheath caudally) the coccygeal segmental nerve and the sacral segmental nerves (S1 through S5). Their anterior branches travel through the pelvic sacral foramen and their posterior branches through the dorsal sacral foramen. Caudal (epidural) anesthesia blocks the areas that are supplied by these segments. Different from → (T) presacral infiltration, this also blocks the posterior roots. It enables us to achieve an anesthetic (i.e., neural-therapeutic) effect in the following areas:

- *skin:* anus, perineum, scrotum, penis, and the region of "saddle-block anesthesia" of the lower buttocks;
- *organs:* lower rectum, vagina as far as the cervix of the uterus, ureter, pelvic floor, prostate; in addition, the anal sphincter is also relaxed.

The spinal nerves that pass through the dural cavity are surrounded by thick dural sheaths. Thus, in order to produce a "saddle-block anesthesia" adequate for surgery, we need to use substantial quantities of anesthetic solution, as in any epineural conduction anesthesia (about 20 mL). The epidural space lies between the dural sheath of the spinal cord and the periosteum of the vertebrae and can hold over 100 mL. For neural-therapeutic purposes it is often sufficient to inject 5 mL of procaine, and this is soaked up by the loose tissue in the epidural cavity as if by a sponge. Experiments have shown that this solution can diffuse as far as the cervical segment.

Indications Any disorders in the areas mentioned above, irrespective of whether they present as inflammation, pain, itching, or other symptoms, principally affecting the external and, in part, also the internal genitals; sexual disturbances, enuresis, bladder disorders, encopresis in multiple sclerosis, piles.

Obstetrics form a special indication. Epidural anesthesia with 20 mL of procaine will, after about 15 minutes following administration, reduce labor pains for 1–2 hours without in any way inhibiting labor. On the contrary, expulsion of the fetus is facilitated and accelerated by the relaxation of the pelvic floor.

Reischauer explained the effectiveness of epidural and presacral infiltrations in the treatment of sciatica by their ability to damp effectively the reactions of the spinal roots and the sympathetic fibers in their vicinity, which are due to the mechanical irritation caused by the prolapsed cartilaginous disks.

Materials 1 mm × 60 mm-long needle.

Quantity Depending on the object of the injection and varying from 5–20 mL of procaine solution; 10 mL remain mainly within the epidural cavity of the sacral region, 20 mL diffuse as far as the lowest lumbar segments, 30 mL as far as the level of the umbilicus (T9 to T10) and 40 mL will spread as far as T6 to T7 (lower shoulder blade). Even if as much as 40 mL of 1 % procaine solution is injected, there will be no motor dysfunction of the legs, which would complicate outpatient treatment.

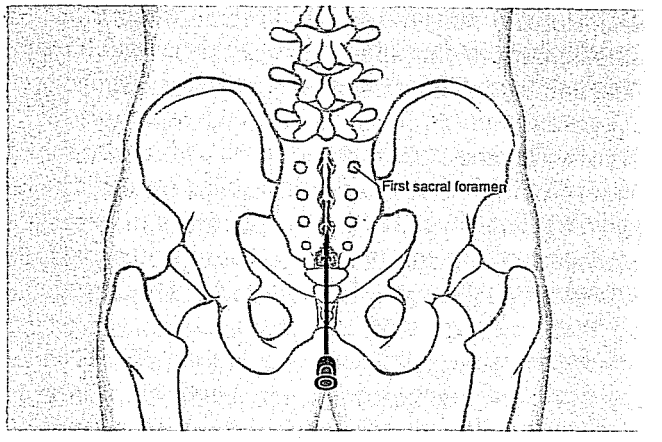


Fig. 3.8 Epidural (sacral) anesthesia.

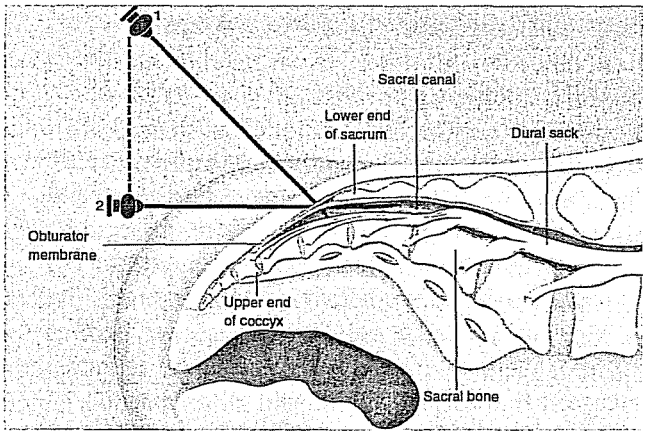


Fig. 3.9 **Diagram showing the epidural injection.**
1. Entry of the needle through the upper part of the membrane.
2. The needle is depressed a little and advanced about 50 mm into the sacral canal; the injection is given following a negative aspiration test.

Technique The knee–elbow position is generally recommended but is not essential. A number of authors prefer the patient lying on his or her side. We prefer the patient to stand hard against a table, placing the upper part of the body bent at right angles forward on the table top. The finger is used to palpate the readily identifiable bony protuberance of the sacral cornua and the springy membrane stretched between them that covers the sacral hiatus. This lies about 20 mm above the cranial end of the natal cleft. It is occasionally difficult to locate this, but only in adipose patients. In such a case, it is merely necessary to go about 40–50 mm cranially from the tip of the coccyx to find the opening. After

disinfection of the skin, the 60 mm-long needle is inserted steeply into the upper part of the membrane; the haft is then depressed far enough to enable the needle to slide a further 40–60 mm cranially within the sacral canal.

Aspirate (there must be no sign either of blood or liquor)! The dural sheath ends approximately 60–90 mm above the point of insertion of the needle and thus it will not normally be penetrated. If the needle is in the correct position and the injection is given slowly, the procaine should flow out without resistance. One can also check that the needle is in the correct position by injecting about 1–2 mL of air after negative aspiration. If an emphysema forms in the skin, the needle is not in the sacral canal. If it is in the right position, the air injected into the sacral canal will push the subarachnoid away from the point of the needle. If (on rare occasions) the dural sheath is, in fact, entered, refrain from giving the injection that day. There are no other unpleasant side-effects from this injection and it offers hardly any technical difficulty. Because of its wide spectrum of indications, it is thoroughly recommended for general practice. The effect can be further increased by additionally injecting into the → (T) sacral foramina. Figures 3.**8** and 3.**9** show the epidural anesthesia and injection technique.

Epigastrium***

Indications All → abdominal disorders. This injection to the peritoneum of the upper abdomen will often suffice on its own; if it does not, we combine it with one to the abdominal→ (T) celiac ganglion.

Materials About a size 1 needle.

Quantity 2 mL.

Technique The patient lies on his or her back. The entry site (Fig. 3.**10**) is on the midline of the body, three fingers' breadths below the xyphoid process, and we penetrate to a depth of 30–50 mm, depending on the adiposity of the patient, to the linea alba, infiltrating a little all the way. There is noticeable resistance as we penetrate the fascia. Immediately beyond this the point of the needle is at the required injection site. Even if we were to penetrate the peritoneum accidentally, the slow progress of the needle under constant pressure on the plunger and with steady infiltration as we proceed would prevent injury to the abdominal organs. In 1976, a court in Esslingen convicted a non-medically trained practitioner on a count of negligent manslaughter of a woman patient who died of necrosis of the pancreas following an injection into the epigastrium. During surgery it was found that not only had the lobe of the liver been punctured, there was injury also to the pancreas! This singular case indicates too brusque an approach with too long a needle and a lack of anatomical knowledge.

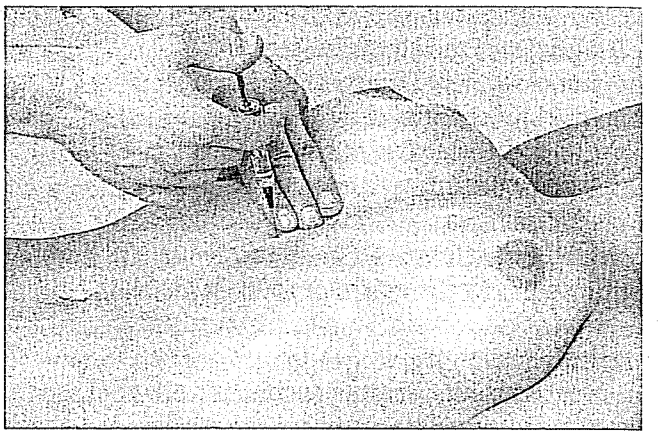


Fig. 3.**10** Injection into the epigastrium (to the upper part of the peritoneum).

Frankenhäuser's Ganglia***

Alternative terminology Paracervical block, transvaginal injection to the utero-vaginal plexus (Frankenhäuser's), or utero-sacral block.

Anatomy The plexus of the female pelvis travels along the interior iliac artery and the uterine artery to the lateral uterus. In its parametrium it forms the large utero-vaginal plexus (Frankenhäuser's) with many ganglia. Secondary fibers of the pelvic plexus innervate the bladder, vagina, the uterus, and the clitoris.

Indications

1. *Segmental therapy:* For endometritis, parametritis, dysmenorrhea, abnormal menstruation, neuritis of the pelvic floor, lower abdominal pain and/or backache, dyspareunia, sense of pelvic discomfort and downward pressure, frigidity, sterility, disorders connected with the menstrual period such as headaches, autonomic pelvic disorders etc. In 1954, Goecke reported more than 247 cases of cervical hypersecretion that did not respond to any form of treatment. In 83.3 % of the cases he was able to cure or considerably improve the condition with paracervical infiltrations. This also cures existing portio erosions. In the treatment of → irritable bladder, urination regulating parasympathetic and sympathetic fibers of the pelvic plexus are temporarily blocked. For this condition we also infiltrate paraurethrally at the anterior vaginal opening, 2 cm dorsally to the external vesical orifice.

b. *In searching for an interference field, as a test injection:* When the patient's history includes: vaginal discharge, abortions, difficult labor, preg-

nancy terminations, D&C, puerperal fever, pelvic inflammatory disease, gonorrhea, any surgery involving the genitals. The test injection into the → (T) pelvic cavity through the abdominal walls is much easier and generally adequate. If this produces a substantial improvement in the remote disturbances but does not achieve the required 100 % freedom from symptoms, the transvaginal injection to Frankenhaeuser's plexus should be tried in addition.

c. *In labor:* In obstetrics, 5–10 mL of procaine solution are given on each side to relieve pain in the initial phase of normal, straightforward labor. In first pregnancies it is advisable to wait until the cervix has reached a diameter of about 50 mm; in subsequent pregnancies it should have become dilated to about 30–40 mm before the anesthetic is given. The first side is infiltrated between two contractions, and the other infiltration given two contractions (i.e., about 15 minutes) later. The pain-relieving action generally starts to take effect immediately and remains effective for 1–2 hours. Infiltration of greater quantities blocks the pelvic plexus with its links to the presacral nerve and to the sacral plexus.

Contraindications During the period, it is advisable to avoid any transvaginal intervention, including this injection. However, there is no objection even during menstruation to an injection from the outside into the → (T) pelvic cavity.

Materials 0.8 mm × 80–100 mm needle, with pilot tube like the PP needle made by Woelm; quantity 2–4 mL, 10–20 mL for obstetric purposes.

Technique The bladder should be emptied before the injection. The patient lies on the gynecological couch and the uterine cervix is fixed in a speculum. On psychological grounds one should avoid, as far as possible, letting the patient see the long needle. Insert the needle through the mucosal fold in the lateral fornix beside the cervix, i.e., through the lateral vaginal vault, between about the 3- and 4-o'clock positions and the 8- and 9-o'clock positions. The needle is then advanced slightly at an angle in a lateral and dorsal direction. The cervical ganglia lie laterally from the cervix and further dorsally. We now distribute about 1–2 mL procaine on each side, at a depth of only about 10–20 mm, to Douglas's peritoneum and to Frankenhaeuser's plexus (see Fig. 3.**11**). The risk of puncturing the ureter or the uterine artery is easily avoided by going in as described through the vaginal vault rather than advancing parallel to the cervix. This injection influences the parasympathetic pelvic ganglion, which lies near the organ and has important regulating functions.

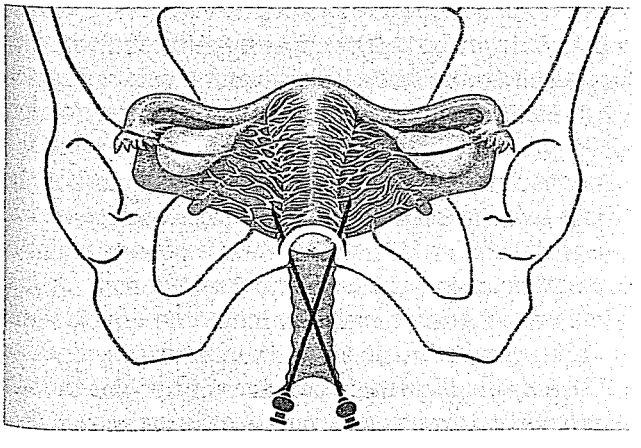


Fig. 3.**11** **Injection to Frankenhäuser's ganglia.** The point of entry of the needle is through the lateral fornix, injecting at a depth of 10–20 mm.

When working with the needle with a pilot tube, the free hand locates the point of insertion of the needle between index and middle finger. The free hand then slides the tube to this point and places its outer end on the inside of the opposite thigh. The assistant introduces the long needle with the 5 mL syringe attached into the pilot tube without letting the patient see it. The needle is inserted as far as it will go, aspiration is carried out under the doctor's control and 2 mL of procaine injected. The same injection is then also given on the other side.

Consequential bleeding is very rare. If it occurs, it can be stopped by compression with a cottonwool pad covered with lint. The patient remains lying down for 15 minutes. After a check, an absorbent pad is placed in position, and the patient is allowed to leave. Gynecologists are used to hooking into the posterior external os of the uterus with bullet forceps to pull the portio toward the symphysis in order to inject the local anesthetic into the tightened sacrouterine ligaments. Our experience has shown that this injection can be successfully done without hooking into the portio. However, if doing so, one should also remember to inject into the attachment site of the forceps in order to avoid scar interference field formation.

Any scars present as a result of a perineal tear or episiotomy are of course always injected at the same time. In women who have already had children, the perineum should always be infiltrated at least once at the same time as giving this injection, even if there are no externally visible macroscopic scars. The injection into the perineal tissue is painful because of the large number of nerves it contains. Scars following Emmet's tears and in the related parametric ganglia so often form interference fields that they must be found by palpation and treated by injection. Here, too, the PP needle is used to help locate the point of insertion accurately. If the scar tissue is so hard that the needle is difficult

to insert, it helps to ask the patient to cough, and the needle will enter effortlessly. It is worth taking a little trouble over this injection, since it will often be rewarded by a genuine Huneke phenomenon.

Following irradiation treatment for cancer, in cases of endometritis and myometritis, in cervical erosions, conization, uterine tears during parturition, or in other uterine disorders or operations (e.g., scars caused by forceps during delivery), the effectiveness of our therapy can be further increased by an → (T) intramural injection.

For any vaginal interventions that may become necessary in virgins, the intact hymen can be made soft and flexible enough for the speculum for about 24 hours by mixing an ampoule of kinetin (hyaluronidase) with 5 mL of procaine solution, first infiltrating under the base of the hymen with a fine needle and then infiltrating directly.

Intercostal Nerves**

Anatomy The intercostal nerves supply the sensory nerves to the thoracic wall including the parietal pleura and the anterior abdominal wall with the sensitive parietal peritoneum. From the intervertebral foramen to the angle of the ribs the nerve runs in the middle of the intercostal space, from there to the anterior axillary line it lies directly under the rib. If the effect of the injection is inadequate, anastomoses of the intercostal nerves make it necessary to block the adjacent nerves at the same time.

Indications Intercostal neuralgia, shingles, carcinoma pain. To relieve pain and improve respiratory excursions and the coughing up of secretions in fracture of the ribs, pleurisy, pulmonary embolism, pneumonia and following abdominal surgery; pectoralis minor syndrome. If the patient is suffering persistent pain, the possibility of vertebral disorders, cancer, and tabes should also be considered.

Materials Short needle.

Quantity Procaine solution per injection: 0.3–1 mL.

Technique By inserting the needle 50 mm to the side of the spinous process and going straight down, one strikes the relevant rib. Obviously, we look for this nerve according to the site of pain, e.g., next to the spine, in the axillary line or next to the sternum. If we want to inject next to the spine, the patient needs to place their forearm onto their forehead, which moves the shoulder blade away from the place of insertion. In this section, the nerve is still located in the middle of the intercostal space. In order to affect the lateral cutaneous ramus, insertion into the posterior axillary line is recommended. Then we advance the point as far as the lower edge of the rib. To avoid injury to the pleura we maintain steady pressure on the plunger and continue another 5 mm—never more!—into the intercostal musculature. In doing so we try to obtain nerve contact. The patient needs to be prepared for the sharp pain this will produce, to avoid making any sudden defensive movement due to fear or surprise. If their symptoms recur, they will probably happily submit to this somewhat painful injection again, for nothing else can better relieve or get rid of these unpleasant and frightening symptoms. If very occasionally the pleura is accidentally perforated, a pneumothorax may be produced. Generally, this is not even noticed by the patient, but if it is, it will heal of its own accord within 2–3 days with a little care on their part to avoid overexertion, but without substantially affecting their general state of health. If more severe symptoms continue or if there is any suspicion that they might have a tension pneumothorax, an x-ray check is advisable.

Intra-arterial injection → (T) afferent arteries.

Intramural Injection into the Uterus**

Indications Conditions following x-ray or radium therapy; in addition to the injection into the → (T) pelvic region and to → (T) Frankenhaeuser's ganglia for any sequelae of febrile abortion, placenta accreta, cesarian section, endometritis, cervical stump following a supravaginal hysterectomy, cervical tears after labor, conization, cervical erosion etc.

Materials 1 mm diameter × 100 mm-long needle, a self-retaining speculum, vulsellum, tightly fitting record syringe.

Quantity 4–6 mL.

Technique The injection described by Mink requires good fingertip sensitivity, patience, and the ability to proceed with gentle force. In addition, because it can be painful, it also calls for the ability to distract the patient verbally.

The patient is placed on the gynecological couch and the speculum adjusted to visualize the cervix. Following disinfection, the anterior lip of the cervix is carefully grasped with a vulsellum and pulled forward. The 100 mm-long needle must not be too thin. This is now inserted as far as it will go in the cervical canal. When resistance is felt, the point of the needle should be advanced into the myometrium by slow screwing motions through the mucosa of the isthmus or the body of the uterus. One can also use a simple trick to get the point of the needle into the uterine musculature without the patient being aware of it: hold the syringe firmly, ask the patient to cough briefly, and the needle will be in position. Aspirate, then patiently, sensitively,

press middling hard on the plunger of the syringe. It may take as long as 2 minutes before the reactive spasm of the uterine musculature relaxes and the preparation can flow in relatively easily.

In sensitive or highly-strung women it may first be necessary to give a paracervical injection to → (T) Frankenhäuser's ganglia. There is no need for a general anesthetic. Following an intramural injection into the uterus, we also inject the site where the vulsellum was attached in the cervix, and after overcoming the resistance of the musculature we allow another 1–2 mL procaine to flow into the myometrium from there. Following the injection, the patient inserts a vaginal tampon to absorb any bleeding that may occur on her way home.

This injection is repeated at intervals of several days to a week. As a rule, three to five injections will suffice, even for the main indication of reactive fibrosis of the endo- and myometrium following radiation treatment for carcinoma.

Intramuscular Infiltration***

We regard an intramuscular injection merely into the upper outer quadrant of the buttock as a complete waste of time, even when, as in Aslan's therapy, it involves a continuous flooding of the organism with large amounts of procaine. Ours is a selective procaine therapy and we therefore limit ourselves to looking for pathologically changed muscle tissue for treatment by our method. Every disturbance of the organism affects the skin through viscerocutaneous pathways and the muscles through visceromuscular pathways (see Fig. 1.2, Part I, p. 24). More thorough (deeper) palpation of the painful muscles guides us to particularly painful points, the so-called myofascial → trigger points. They emit centripetal pain impulses. If the centrally regulated reflex responses fail because of positive feedback, the pain keeps intensifying retroactively and more and more peripheral nociceptors are engaged. The anesthesia of the hyperalgesic points and zones interrupts the vicious circle. It eliminates all local disturbances and those originating here but traveling to other areas.

Complicated processes of movement, such as physical work, sport, ball games, walking, dancing, etc., are based on the collaboration of connected muscle groups, so-called myokinetic chains. Pain in some of the muscles can be transmitted to others and spreads. When we eliminate the source of the pain in muscles, tendons, and periosteal attachments, we also eliminate the pain that has traveled from there to other places.

It has been proved that the injection of procaine into spastic musculature whose nutrition has been disturbed reduces its tonicity and pH. By eliminating pain we can also interrupt pathological reflex processes. This explains the disappearance of locally circumscribed and of more extensive disharmony. The tissues treated with procaine are better supplied with blood. This stimulates the metabolic exchange and thus the removal of metabolic waste, which is a pain-producing agent. If the reflex muscle spasms improve together with the attenuation of pain, the patient becomes psychologically more relaxed. This activates the highly desirable cooperation on their part that results in further improvement in their muscular functions, enables them to cope more easily with the dysfunction, and become less dependent on medical aid. Hence, our motto must be to make the patient pain-free and encourage movement. If muscular stiffness persists for too long, there is a risk that it may turn into an irreversible condition with the formation of mature scar tissue and completed cicatrization, and create an interference field.

Indications Trigger points, myalgia, lumbago, muscle spasm, muscle strain, muscle tears, myogelosis, fibrositic nodules, torticollis, vertebral syndrome, tension headache, bad posture, unilateral physical stress through work or sport, insertion tendopathy, muscle tension due to stress; also all segmental muscle-reflex symptoms, including joint and organ disorders.

Materials We choose a needle according to the depth at which the process is taking place. Since this is often greater than at first assumed, it is always better to use a longer needle.

Quantity The quantity of procaine used will depend upon the extent of tissue change, but we never inject at the rate of more than a few drops to a tenth of a milliliter of the product in any one site.

Technique We set a → (T) quaddle over the site indicated by the patient or found by palpation to be painful and then pass the needle through this to probe deeper. When the diseased muscle tissue is reached, the patient will indicate this by reporting a sharp pain ("ouch point"). Anyone who has developed a feel for tissue will sense that the needle is meeting resistance in the altered tissue. There is a kind of creaking sensation as if one were going into sandy clay. Into this area we inject only a few drops of procaine; these will be enough to set off the required healing reaction. We always need to limit ourselves to working with the smallest possible stimuli. The improvement does not depend on the anesthetic effect. What matters is not so much the quantity as the correct site!

After the injection, we distribute the product through the tissue with a few circular massaging movements. The injections may need to be repeated after a few days. There is no better or economic form of treatment than this.

Intravenous Procaine Injections***

Indications Intravenous injections of procaine are used:

- to relieve pain (as endoanesthetic);
- as vasodilator;
- to regulate the circulation;
- as ganglioplegic;
- to reduce vascular permeability;
- as anti-emetic;
- as diuretic;
- as anti-pyretic;
- as spasmolytic;
- as anti-allergic measure (as anti-hyperergic);
- as autonomic reversant treatment;
- to reduce inflammation (as anti-phlogistic).

By way of the blood vessels, the intravasally injected or enterally administered local anesthetics reach the internal and external sensory organ and tissue receptors or afferent structures and desensitize them by decreasing their excitability. The synapses of the parasympathetic ganglia respond to lower doses of the anesthetics than the sympathetic ganglia. This "endo-anesthesia" affects, for example, the receptors of the carotid sinus and the heart and inhibits stimulus formation and transmission in the cardiac muscle. We also reach the visceral receptors of stomach, intestinal, and urogenital system, as well as muscle and pain receptors this way.

The favorable effect of procaine on cell metabolism is based on an increased oxygen supply and the more rapid removal of metabolic products. It sensitizes the uterus to the posterior pituitary hormone. In the experimentally induced circulatory collapse using veratrin (Bezold-Jarisch reflex; Eichholtz, Fleckenstein, Muschaweck, Zipf), a spontaneous lowering of blood pressure occurs, with a reduced pulse and respiration rate to the point of collapse. We know this reflex clinically in the shape of a cardiac infarct. The collapse response can be prevented by giving procaine intravenously, because this desensitizes the receptors. The same also applies to anaphylactic serum shock and necrosis formation in the Shwartzman-Sanarelli phenomenon (Hirsch, Keil, Rademacher, Siegen). Through experiments, these authors also showed that the permeability of terminal blood vessels due to dysregulation can be reduced.

This imposing list of positive characteristics has earned procaine its title of "king of medicines." But in addition to this, procaine or lidocaine given intravenously develop an effect so extensive that none of the attempts made to explain this from a pharmacological point of view can offer full satisfaction. In addition to eliminating vasomotor dysregulation, there can be little doubt that it also has a regulating effect on higher order control centers. It improves the patient's general state and restores the balance in all autonomic dysfunctions. In doing so, it will depend on the initial state whether it acts as an autonomic relaxant or improves tonicity in the opposite sense. This neural-therapeutic effect tending to re-establish the normal state is set off by the healing stimulus that procaine has upon the autonomic plexus of the vascular wall. This effect is obtained with even the minutest quantities of procaine. We therefore take the view that if 1 mL is not enough to produce a decisive response from the reticular system, then 5 mL or even more will not do so either. But since with intravenous injections the risk of toxicity increases rapidly with the quantity administered, any larger quantities are as dangerous as they are pointless. Thus, let us stick to the single and harmless milliliter.

The intravenous injection of 1 mL of procaine and of a few drops given paravenously, in conjunction with injections to other sites, is indicated as a reversant and balance-restoring basic treatment for all disorders in the regions of the head, neck, and throat and of the thoracic area, and for the treatment of a large number of other pathological conditions. It affects regulation centers and vasomotion. Repeated injections have a regulating effect on the autonomic system and act as a normalizing vascular exercise for all neurovascular dysregulations and their consequences for trophism and function of the tissues:

> The effect of intravenous anesthesia on the functions of the autonomic nervous system can be compared to the sympathetic blocks and the vegetative drugs used with these disorders. Sympathetic blocks and intravenous anesthesia have a longer lasting effect than the duration of the actual anesthesia (reversal of the autonomic tonus). (Leicher, Haas)

In South America, surgical operations have been carried out since 1950 on patients placed under an anesthetic induced by the intravenous administration of procaine. A barbiturate is given as a basic narcotic, together with a muscle relaxant, and 1% procaine is then administered in a 5% dextrose solution by continuous infusion. This anesthetic has been found to be adequate for most surgical operations! A report by Parada covered 300 000 cases and showed that this method is well-established and widely used.

Materials Size 12 needle.

Quantity Only 1 mL of 1–2% procaine or 0.5–1% lidocaine solution. We may inject a larger amount only under exceptional circumstances, but always without adrenalin, acetylcholine, or other autonomic stimulants! Never inject more than 1 mL 2% pro-

caine intravenously! As a matter of principle, any departure from this well-established rule should be treated as a rare exception and must be left exclusively to experienced neural therapists! And not even they should exceed 2 mL and must always inject slowly. Zipf lists as intravenous maximum dose 2.5 mg/kg body weight. A little more could be too much!

In a court judgment given in Frankfurt in 1967, it was stated that an intravenous injection in conjunction with other procaine injections is not permissible "in view of the cumulative effect of stimuli." Our practical experience does not accord with this. Intravenous procaine therapy has a general reversant effect on the autonomic system, which cannot be achieved to a similar extent by subcutaneous or intramuscular injections. Segmental therapy with procaine is used for other purposes. Provided the limiting dosages are observed, the two types are perfectly compatible with each other.

Technique Except in very apprehensive or labile patients who are better treated in a recumbent position, this injection can be given without hesitation to the seated patient. Contrary to what one may often read, practitioners of neural therapy according to Huneke do not inject particularly slowly. F. Huneke injected the milliliter into the antecubital vein, with tourniquet in position and then released the tourniquet. Thus, the whole of the dose enters the circulation at a stroke and thus literally constitutes a therapeutic thrust into the neurovegetative system. Before taking out the needle, always also give a few drops of procaine paravenously, as the neural-therapeutic effect is further increased if the reticular system surrounding the vein is included, since this is particularly richly supplied with autonomic terminal fibers. Procaine is rapidly metabolized in the body. In an emergency, the intravenous injection may be repeated at half-hourly intervals.

Side-effects Sometimes, following the injection, the patient may show such symptoms as slight dizziness, pallor, tremor, or sudden sweating ("initial vasospasm"). All these are perfectly harmless and pass off after a few minutes. When using procaine, we may very occasionally see more severe symptoms such as a tendency to collapse or unconsciousness. In such a case, we lay the patient flat and let them remain like that for 15 minutes. Do not give any vasopressors!

In over 100 000 intravenous procaine injections to date, I have never yet had a case of convulsions, coma, respiratory paralysis, let alone a fatality. Reports of such incidents are based on overdoses and on the fact that other and more toxic preparations containing procaine or modern amide-structured local anesthetics with a vasoconstrictor additive have been used! If the patient feels thirsty, he or she should be given a drink of water. Nervous, highly-strung patients should be given a harmless valerian preparation.

Joints

From a morphological anatomical viewpoint, the joints are merely movable links between the bones. Seen cybernetically, they also have an important control function. Their environmental sensors (receptors) not only indicate to the center the positions of the joints, they also regulate and influence their own environment via the autonomic nervous system and trigger off pain when there is an appropriate stimulus. The interlinking with other control circuits passes beyond the spinal-reflex functional circuit to affect every part of the organism. Our knowledge of these relationships should prevent us from regarding or treating any system—in this particular case the joints—in isolation.

With regard to treatment, as far as possible we prefer to do without corticosteroids and medical preparations, since they are mostly as unnecessary as they are harmful. However, we must exclude dislocations, major fractures, articular tuberculosis, and metastases from treatment with our injections or, if neural therapy is used, it should be limited to a supporting role. The standard diagnostic procedure must not on any account be omitted before treatment. X-rays and laboratory reports have in our view a purely informative function, since they can tell us little about the state of the diseased structures and nothing about the causal relationships between the pathological findings and the loss of function. This is particularly true of degenerative changes such as osteophytes and the like. At all events, unusual or even abnormal findings should not deter us from taking appropriate neural-therapeutic action.

Injections directly into the joints will only rarely be necessary! Generally, all that will be required are → (T) quaddles and deeper → (T) intramuscular infiltrations near the joint. So, for example, arthritis or arthrosis of the knee due to purely segmental causes will be cured by five simple quaddles around the knee, provided that this segmental treatment is repeated a sufficient number of times. If this treatment does not produce the desired result, then other injections in the segment hold little prospect of success. Nevertheless, it still happens time and again that injections of procaine or Xyloneural into the joint work wonders. Procaine has a desensitizing effect on the synovial membrane. But if there is an interference field at the root of the pathological changes in the joint, neither quaddles nor intra-articular injections will help to any significant degree.

We have been taught that there is a certain risk of infection whenever an injection is made directly into a

joint. On the other hand, we have learned from experience that procaine, apparently by normalizing the electrical charge, can prevent → infection and → inflammation. This pragmatic discovery is further strengthened by the fact that we have never seen a single case of infection after injecting procaine. With this knowledge we can overcome the fear of infection following the injection of procaine into a joint. But to make doubly sure, we should always disinfect the skin over the joint before giving the injection (for liability reasons too!). This should be done particularly thoroughly if the patient has previously been on (regulation-blocking) corticosteroids, since in such cases the risk of infection is especially high.

As always, the needle should be inserted briskly. If the point of the needle can be moved freely, if it is easy to inject air, and if synovial fluid is aspirated, we have the assurance we need that the needle is correctly positioned within the joint capsule. If there is an existing effusion, this should be aspirated and a little of it mixed with the procaine before the injection.

Injections of procaine or Xyloneural into joints can be made irrespective of the blood sedimentation rate, the patient's age, or the length of time that they have suffered from their disorder, and regardless of their general state of health. Even the worst possible x-ray picture is no contraindication. The function is always of far greater interest to us than this momentary photographic record of the skeleton (provided that malignant processes can be excluded). We do not intend to change anything in the bone but to improve, and, as far as possible, restore the function. Our form of treatment is far more sparing than any surgical operation. For this reason, a sufficient number of repeat injections should always be planned before any intended surgery. Before any surgery is undertaken, every possibility in the segment should be exhausted and a painstaking search for a potential interference field concluded. If a disorder is due to an interference field, any local surgery is pointless and is bound to fail.

In treating painful joint disorders we need to remind ourselves that the neural and vascular supply of all the major joints (shoulder, knee, hip, elbow) emanates from the flexor aspect of the joint. A deep injection from there as far as the periosteum is always without risk, even if we pass the needle through nerves, vessels, and joint capsules, and even intra-arterial injections are harmless and are often extremely desirable. Since, in giving such injections, we are carrying out segmental therapy, a substantial improvement is all that is required to justify repetition.

Indications: Arthritis, arthrosis, gout, all post-traumatic symptoms and partial stiffening of the joint, recurrent effusions.

Overview

The joints listed below will be covered over the following pages:

1. temporomandibular joint, p. 306;
2. shoulder joint, p. 306;
3. acromioclavicular joint, p. 307;
4. sternoclavicular joint, p. 307;
5. vertebral joints, p. 307;
6. elbow joint, p. 308;
7. wrist joint, p. 309;
8. hip joint, p. 309;
9. sacroiliac joint, p. 309;
10. knee joint, p. 310;
11. ankle joint, p. 311;
12. finger and toe joints, p. 311.

1. Temporomandibular Joint

Indications Costen syndrome, temporomandibular joint luxation, temporomandibular joint pain, trismus.

Anatomy When the patient opens the mouth wide and closes it, the mandibular condyle slides anteriorly to the zygomatic process, which creates an easily palpable depression.

Materials Needle: 20 × 0.4 mm.

Quantity 1 mL.

Technique The patient needs to keep his or her mouth opened wide. After disinfecting the skin, we insert the needle 10 mm anteriorly to the tragus, toward the side of the nose. The needle is advanced medially into the anterior part of the joint capsule until contact with the bone is made. Now the needle is pulled back slightly and 1 mL of a local anesthetic is injected.

2. Shoulder Joint**

Indications Arthritis, humeroscapular periarthritis, capsulitis, stiff shoulder (frozen shoulder), conditions following contusion of the shoulder, arthrosis deformans, subacromial bursitis, before repositioning a shoulder luxation.

Anatomy This joint is supplied with its sensory fibers from the axillary nerve (→ (T) brachial plexus), from the → (T) cervical plexus and from the → (T) suprascapular nerve.

Materials 0.7 mm diameter × 40 mm-long needle.

Quantity 2–5 mL.

Technique

a. The simplest approach is via the axilla, but this is little used because of the proximity of the major vessels and nerves. An accidental injection into the brachial artery, leading as it does to the periphery would not, however, do any harm. Nor should any accidental penetration of the nerves by the needle give rise to any hesitancy.
b. *Injection from the front:* The patient lets his or her arm hang, with the palm to the front. Imme-

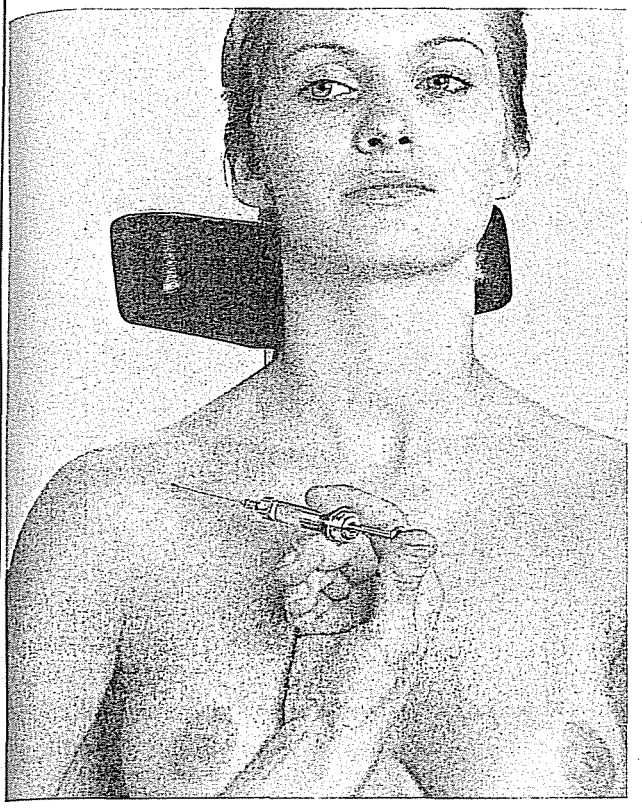


Fig. 3.**12** Injection into the shoulder joint.

diately next to the head of the humerus in a medial direction, it is now possible to feel the articular space. The needle is guided in a dorsolateral direction below the clavicle immediately lateral from the coracoid process. One should remain immediately below the acromion. After overcoming the resistance from the ligaments, it is easy to feel the point of the needle slide readily into the joint (see Fig. 3.**12**). In many cases it is advisable also to inject into the acromioclavicular joint.

c. *Injection from behind:* The arm is put slightly into abduction and internal rotation. At the lateral end of the scapular spine the angle of the acromion is easily palpable. We insert one fingers' breadth caudally from there, advance the needle 20 mm in the direction of the coracoid process, and inject 2–5 ml. After the injection into the joint and before withdrawing the needle, we also distribute 1 mL periarticularly. It is advisable to inject about another 1 mm to the periosteum of the anterior inner part of the humerus immediately below the shoulder joint. In cases of fibrosis of the articular capsule or of contractures, the shoulder blade should be fixed and the shoulder joint carefully mobilized directly after the intra-articular injection. A perceptible crepitus indicates stretching of the capsule. It may be advisable to fit an abduction splint and the treatment should be repeated 2 or 3 days later.

3. Acromioclavicular Joint**

The lateral clavicular joint creates the connection between the lateral end of the scapula (acromion) and the lateral end of the clavicle. It is a ball-and-socket joint with less mobility than the medial clavicular joint. The majority of arm movements are performed using both joints.

Technique After disinfecting the skin, we inject between the lateral end of the clavicle and the acromion vertically from above (with the patient seated). After the capsule resistance ceases, we inject 1 mL. After withdrawing the needle, we inject another 1 mL pericapsularly. (See also → joint diseases and Fig. 3.**13**).

Subdeltoid bursa The subdeltoid bursa (between deltoid muscle and greater tubercle) and the subacromial bursa (between acromion, coracoacromial ligament, and subscapularis muscle) form a unit. In cases of acute and chronic subacromial bursitis we enter through an intracutaneous quaddle two fingers' breadths laterally to the acromion, at right angles to the skin (in the direction of the contralateral costal arch). At a depth of 20–30 mm we pass through the deltoid muscle. After this resistance ceases, we continue carefully until the point of the needle meets further resistance. This is the supraspinatus tendon. We now withdraw the needle slightly and distribute about 5 mL solution fanwise.

4. Sternoclavicular Joint**

The joint between sternum and clavicle is a ball-and-socket joint with three degrees of mobility. This joint allows the movements of the shoulder girdle toward the trunk. It should always be palpated when examining the shoulder joint and treated when sensitive to touch. After disinfecting the skin, we insert the needle from a caudal direction between sternum and clavicle. When the capsule resistance ceases, we inject 0.5–1 mL in 5 mm depth (see Fig.3.**13**).

5. Vertebral Joints**

The small vertebral and costovertebral joints with their large number of receptors are important control elements of the axial organ and participate in its complicated sequences of motion. Pain as a result of trauma, overexertion, or inflammation can radiate from here (pseudoradicular syndrome) and have a negative effect on adjoining organs.

Technique We can eliminate deregulation caused by the small vertebral joints by (after disinfecting the skin) infiltrating with a 50 mm needle vertically, one fingers' breadth lateral to the spinous process, until we make contact with the bone. We withdraw the needle slightly and after negative aspiration and while maintaining contact to the bone, we distribute the anesthetic fanwise periarticularly. We reach

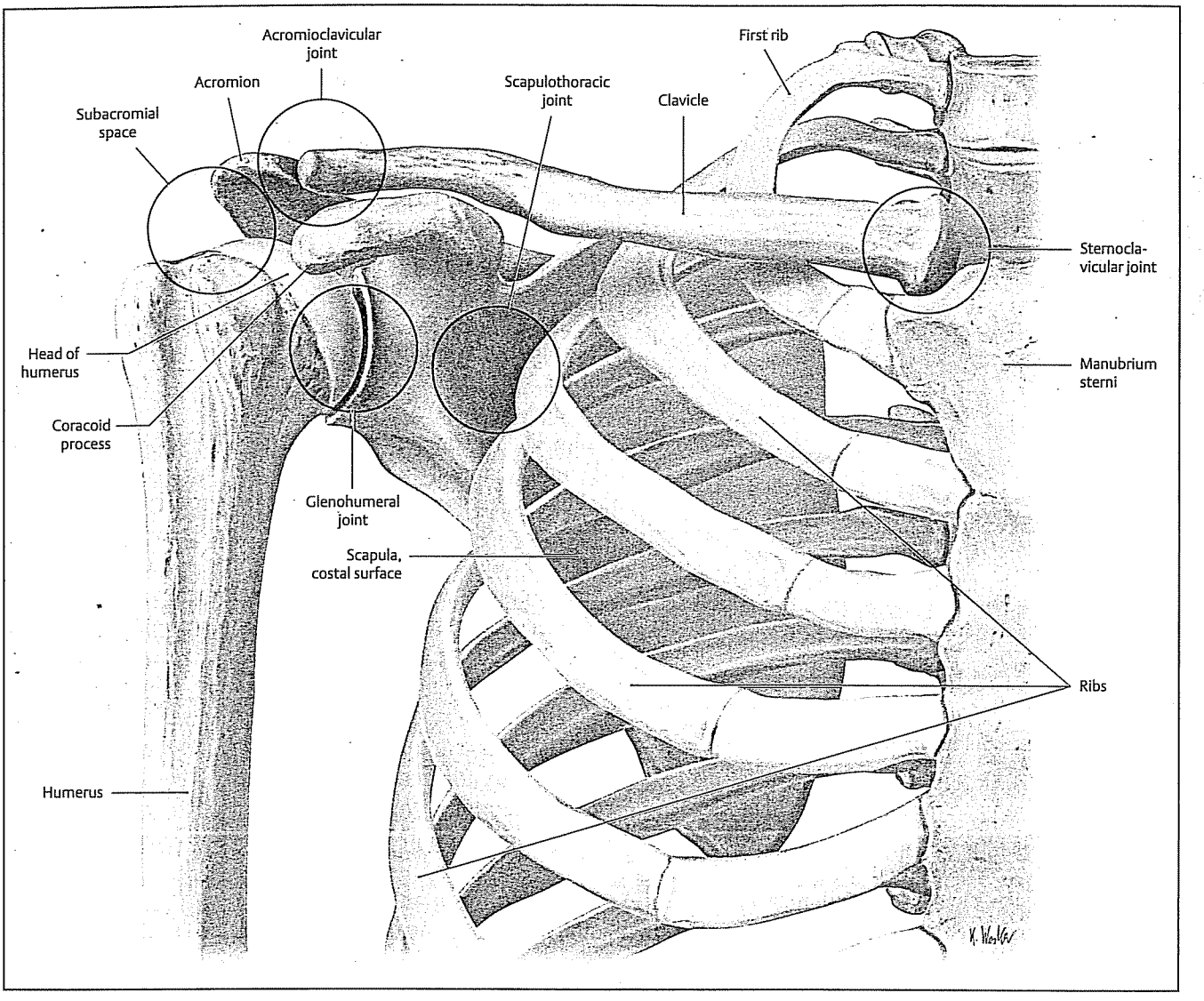


Fig. 3.**13** **The five joints of the shoulder.** Right shoulder, anterior view.

the costotransversal joints by inserting the needle vertically, three fingers' breadth next to the spinous process, until we reach the bone. At the end of the transverse process we perforate the ligament between thoracic vertebra and rib, which leads us into the joint. We inject 1 mL. See also → lung diseases.

6. Elbow Joint*

Materials Size 12 needle.

Quantity 2 mL.

Technique The patient lays his or her forearm on the examination couch in such a way that the elbow remains freely accessible from all sides. The forearm should form an approximate right angle with the upper arm. The olecranon and lateral epicondyle are now marked with a felt pen or skin pencil. The entry site is exactly central between these two points. After disinfection of the skin, the needle is advanced about 10 mm in the direction of the antecubital fossa and the procaine is then injected after the articular capsule has been penetrated. Following the injection the joint should be moved, in order to distribute the solution more evenly. (See Fig. 3.**14**.)

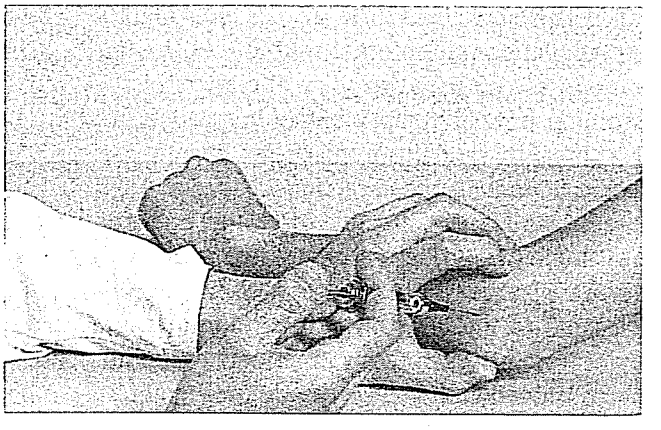


Fig. 3.**14** Injection into the elbow joint.

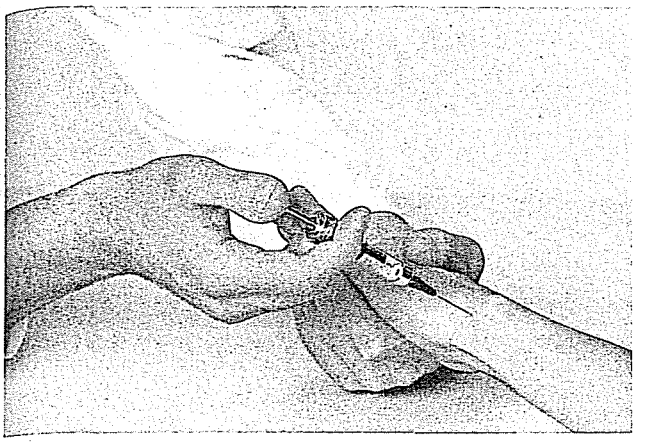


Fig. 3.15 Injection into the wrist joint.

7. Wrist Joint*

Indications Acute trauma, post-traumatic dysfunctions, before mobilizing a stiff joint. Injections to the stellate ganglion, the parts of the → (T) radial, medial, and ulnar nerves that supply the painful area, and/or intra- and periarterially and around the → brachial artery should be performed, before injecting into the wrist joint or the joints of the fingers.

Materials Needle: 20 × 0.4 mm.

Quantity 1–2 mL.

Technique Injection to the proximal wrist joint: We palpate the joint space between the distal end of the radius and the navicular bone. There, we set an intracutaneous quaddle. After disinfecting the skin, we insert through the quaddle and ligaments, 5–10 mm deep into the radiocarpal joint and inject 1–2 mL. With some circulating motions, the patient distributes the injected solution (Fig. 3.**15**).

8. Hip Joint**

Materials 0.8 mm diameter × 80–100 mm-long needle.

Quantity 2–5 mL.

Technique

a. *Injection according to Kibler:* Skin disinfection! The patient lies on his or her sound side. The sound leg remains extended, the other is flexed slightly, i.e., bent at the hip and the knee. Three fingers' breadths cranially from the easily palpated trochanter major and past its upper edge the needle is inserted vertically down. When bone contact is made, the point of the needle is at the neck of the femur and within the capsule. It is now withdrawn about a millimeter, and a small amount of synovial fluid is aspirated before the procaine is injected. It should flow out of the syringe without resistance.

This injection is completely free of risk, and even if one should accidentally give an intravascular injection, there is nothing to fear below the umbilicus. The effect is often astonishing, but initially it is unfortunately only of short duration. The injection will therefore have to be repeated. Its effect can be increased by an injection to the → (T) trochanter. Individual hyperalgetic points on the skin and in the deeper tissue should be found on each occasion and treated at the same time (Fig. 3.**16**).

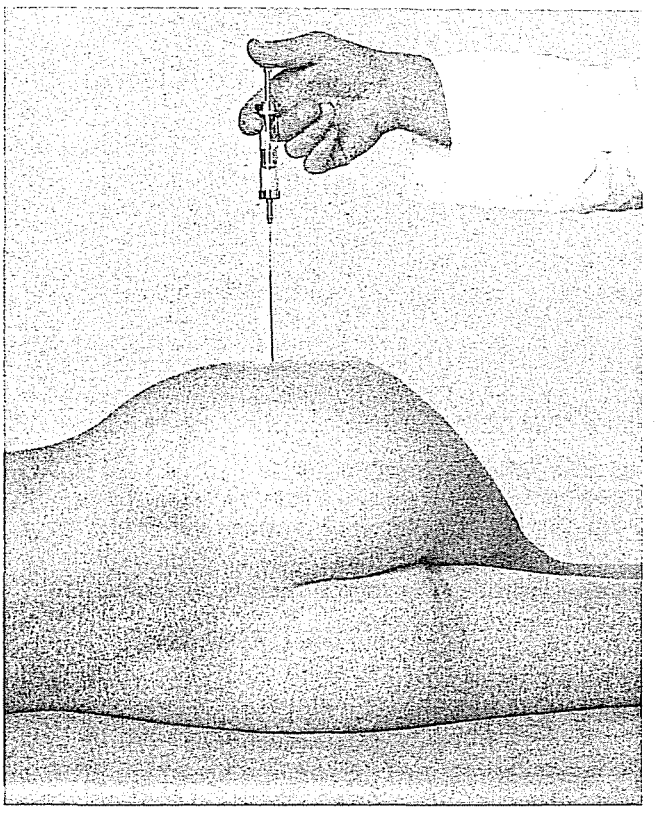


Fig. 3.16 Injection into the hip joint according to Kibler.

b. The patient lies on his or her back, legs together. The needle is inserted vertically down two fingers' breadths laterally from the pulsating femoral artery on the line connecting the trochanter major and the upper edge of the symphysis until we make bone contact. After withdrawing the needle 1 mm, we inject 5 mL. Now we encourage the patient to walk around to better distribute the solution in the joint (Fig. 3.**17**).

9. Sacroiliac Joint**

Indications Lumbago, sciatica, static or post-traumatic backache (e.g., due to a shortened leg), non-specific pain in the lumbar-pelvic area (for example, onset of ankylosing spondylitis) also backache in parous women. The sacroiliac joint forms part of the reflex zones of the true pelvis. Most sciatic pains that do not have the classic sciatica symptoms such as those produced by a prolapsed intravertebral disk are due to a blocked sacroiliac joint. Although there is generally freedom of lateral movement in the

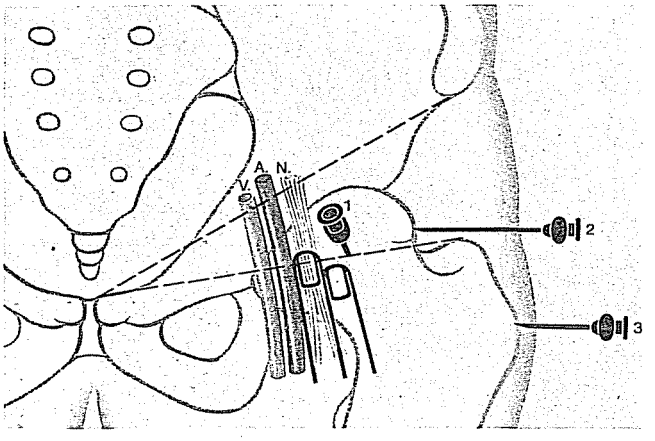


Fig. 3.17 **Injection into the hip joint.**
1. From the front: the entry site is two fingers' breadths laterally from the pulsating femoral artery on a line connecting the symphysis and the upper edge of the trochanter. Go down vertically until bone contact is established, slightly withdraw the needle, then inject.
2. From the side above the trochanter major.
3. Injection to the trochanter major.

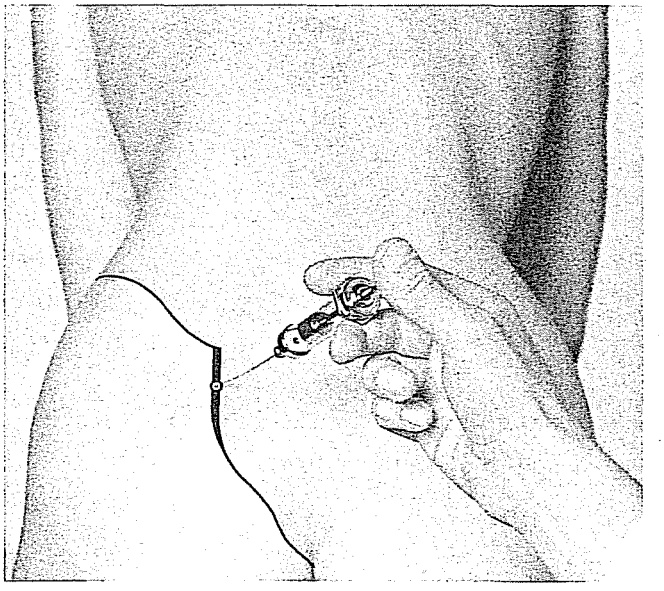


Fig. 3.18 Injection into the sacroiliac joint (auxiliary line for orientation).

lumbar vertebrae, forward movement in the region of the lumbar vertebrae is always restricted and the patient often complains of a dragging pain in the area of the sciatic nerve. The joint space is clearly pressure-sensitive. In addition, the sacroiliac joint is almost always blocked or arthrotically changed in coxarthrosis.

Materials 0.8 mm diameter × 60–80 mm-long needle. Skin disinfectant.

Quantity 2 mL.

Technique The patient stands with his or her trunk bent slightly forward. The joint space is found by inserting the needle three fingers' breadths from the spinous process of S1 and advancing it at an angle of 45° to the skin in the direction of the sacroiliac joint. The neural-therapeutic preparation is distributed at a depth of 30–50 mm. A second injection is then given about two fingers' breadths in a caudal direction into the irregular articular space and into the interosseous ligament. Thus, in Figure 3.**18**, the syringe should be moved to the left after entry, to enable the point of the needle to slide past the posterior iliac crest in a lateral direction to the right into the articular space. Since the periosteum of the iliac bone is generally sensitive to pressure at the same time, it is usual to inject a few tenths of a milliliter laterally to the periosteum at the same time.

10. Knee Joint**

Indications Arthritis or arthrosis of the knee, recurrent effusions of the knee joint, pain following surgery or dislocation of the knee joint, injuries to the cruciform ligaments or the cartilages (unless surgery is required).

Materials 0.8 mm diameter × 35 mm-long needle.

Quantity 2 mL.

Technique The patient lies relaxed on his or her back. The knee is slightly bent by being supported on a roll cushion. The patella is now pushed slightly laterally and, after skin disinfection, the needle inserted almost horizontally on the medial edge of the lower third of the patella in such a way that it will slide behind the patella into the joint. If it is guided correctly, the needle will have no resistance to overcome. After the injection the patient is generally immediately capable of pain-free weight-bearing on the knee. The treatment should be repeated after 3–6 days, later at longer intervals. → (T) quaddles round the knee, including one in the popliteal fossa and especially on the inner aspect of the knee can further increase the effectiveness of this treatment.

Another way into the knee is through the popliteal fossa. With this infiltration we also affect the popliteal vein and artery and the tibial nerve.

An additional safe technique leads to the suprapatellar bursa that generally fills an indentation in the joint space and, thus, has contact to the joint. After disinfecting the skin, a 40 mm-long needle is inserted two to three fingers' breadth superior to the proximal edge of the patella. When reaching the bone, the needle is slightly withdrawn and 2 mL are injected into the bursa.

If the treatment fails to yield results, neuralgia of the → (T) obturator nerve should be considered a possibility, and the saphenus nerve should be kept in mind. This is the terminal branch of the → (T) femoral nerve, whose infrapatellary branch can produce hyperalgesia above the kneecap and over the

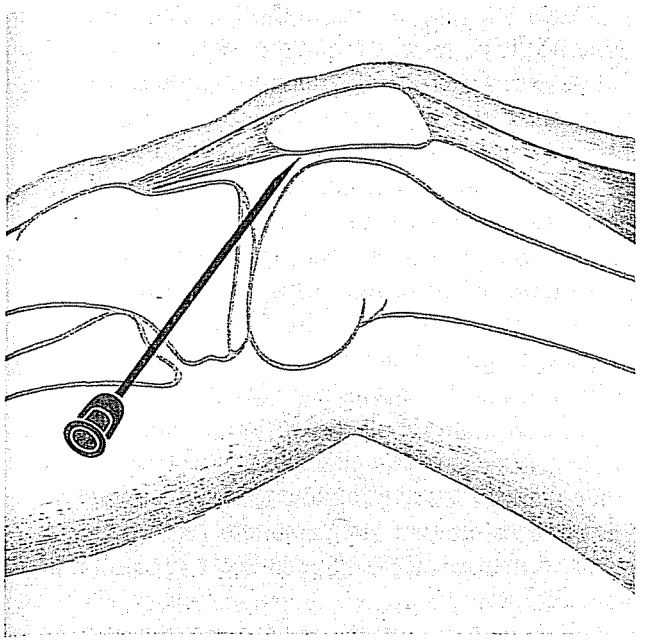


Fig. 3.**19** Injection into the knee joint.

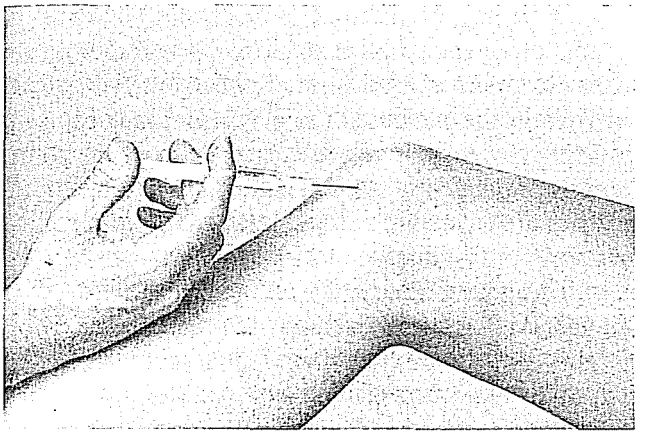


Fig. 3.**20** Injection into the knee joint.

medial articular space of the knee if this has been subjected to irritation. In such cases it will be useful to anesthetize these afferent nerves. (See Figs. 3.**19**, 3.**20**.)

11. Ankle Joint*

Materials Size 12 needle.

Quantity 1–2 mL.

Technique

a. *From behind:* Skin disinfection! The surest way is from the fibular side from behind into the upper ankle joint. The patient lies on his or her side in such a way that their foot rests comfortably on its inner aspect. A → (T) quaddle is then set about a fingers' breadth above the outer ankle bone, i.e., immediately behind the fibular malleolus. The needle is inserted through this, pushed forward horizontally about 10 mm and the injection given into the joint at this point. (See Fig. 3.**21**.)

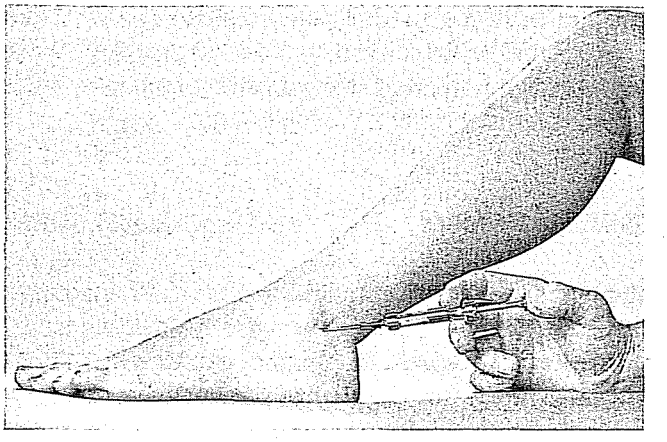


Fig. 3.**21** Injection from behind into the ankle joint.

b. *From the front:* The patient lies on his or her back. The ankle joint is placed on a small pad and the foot is slightly flexed to allow the tendon of the long extensor muscle of the great toe to appear more prominently. Approximately on the line connecting the two malleoli and immediately medially of the tendon, a slight dip can be felt: the articular space between tibia and talus. The needle is inserted here, immediately next to the tendon, and is guided slightly in and down to slide into the joint.

12. Finger and Toe Joints*

Materials Size 16 needle or cartridge syringe with short needle.

Quantity 0.3 mL.

Technique Injections into the small joints are painful. The neural therapist should therefore always use his or her free hand to fix the finger or toe joint to be treated. This type of injection can be given painlessly under a → (T) ring-block anesthetic. As a minimum, however, a → (T) quaddle should be set over the entry point, in order to anesthetize the area, and the needle should then be advanced slowly, infiltrating under steady pressure on the plunger. The joint should be held slightly bent and the injection given from a dorsal direction, but occasionally also from a lateral direction. In the dorsal method, the entry point is immediately to the left or right of the extensor tendon. The point of the needle is then guided slightly forward and down over the head of the bone. Because of the painful tension in the capsule we always limit such injections to a few tenths of a milliliter of procaine or lidocaine.

Injection into first metacarpophalangeal joint Before injecting, the patient has to bend his or her thumb back and up as far as possible. This way, the depression of the "snuff box" is formed. It is the depression

where snuff is placed and is located directly above the dorsal access to the joint. In order to stretch the joint space, the thumb has to be bend all the way toward the center of the palm. We inject 1 mL.

Mastoid Process***

Indications

1. *Segmental therapy:* Acute or chronic otitis media, otitis externa, deafness of the inner ear, tinnitus and other noises in the ear, vestibular vertigo. In acupuncture, this point is also used for rhinitis and sinusitis; a needle set here immediately eases nasal breathing.
2. *Interference-field search:* As a test injection, if the patient's history suggests ear complaints.

Contraindications This treatment must not be used in chronic otitis media if there is any cholesteatoma or severe damage to the middle ear, which always require specialist treatment!

Materials About a size 12 needle.

Quantity 0.5 mL each.

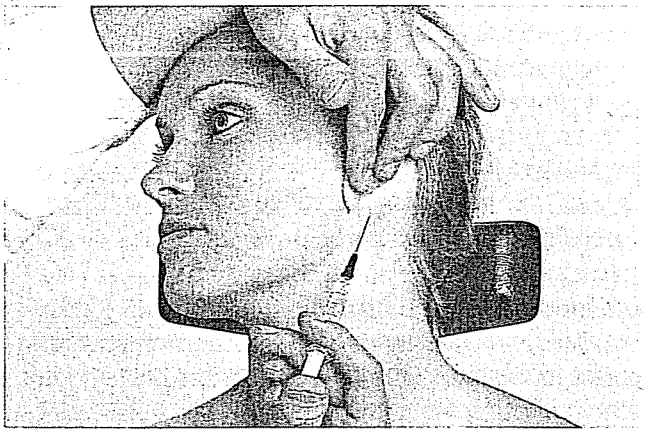


Fig. 3.**22** Injection to the mastoid process.

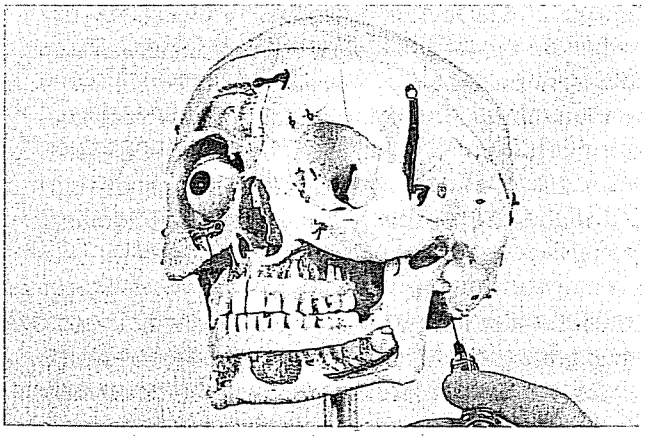


Fig. 3.**23** Injection to the mastoid process.

Technique The ear lobe is turned up. We set a → (T) quaddle over the anterior edge of the mastoid process and pass through this down to the periosteum of the mastoid process, giving a few tenths of a milliliter ventrally and dorsally of the mastoid, in order to include the greater auricular and lesser occipital nerves. (See Figs. 3.**22**, 3.**23**.)

From acupuncture we also adopt a point on the ventral side of the ear, with the suggestive name of "gate of the ear." This lies in the dimple between tragus and the upper attachment of the external ear. Apart from the otological indications, this point is also used in acupuncture in facial paresis, trigeminal neuralgia, occasionally also for tic and trismus. A further acupuncture point we use is TB-18, about a fingers' breadth behind the ear, about the middle of the attachment of the ear where we can generally palpate a dimple.

An → (T) intra- and paravenous procaine injection into the homolateral antecubital fossa can further increase the effectiveness of this treatment when it is given as segmental therapy. If the ear disorder is segmental, it will be cured if this treatment is repeated often enough. If it is not, every possibility that it might be caused by an interference field elsewhere must be explored.

Initially treatment is repeated at weekly intervals and less frequently later. If both sides are affected, they are treated in a single session. The complementary → (T) intravenous injection in such cases will be given alternately left and right; for unilateral symptoms it is given only on the affected side. If there is increased secretion following the injection, this should be regarded as a positive reaction.

If there has been a radical operation that has left a deeply indrawn crater-shaped → (T) scar, the treatment should be limited to infiltrating around this scar. Too vigorous an approach in depth is not recommended in such cases, because of the proximity of the meninges.

Gross gives a further injection in addition to that to the mastoid, by entering from below the tragus and continuing along the anterior external auditory meatus until bone contact is made, i.e., ventrally to the osseous portion of the external auditory canal.

The effectiveness of mastoid anesthesia can sometimes be increased by an injection to the greater auricular nerve. This surfaces approximately at the center of the posterior edge of the sternocleidomastoid muscle and is often found to be hyperalgetic when palpated. If ear scars are present, they are always injected at the same time, and in women patients this must always include pierced ears. I once had a patient suffering from polyarthritis and found a tiny ingrown silver wingnut, which had

kept abscesses going over a period of 25 years and finally led to the establishment of an interference field. With the removal of this foreign body, the pathogenic block in the basic autonomic system was eliminated. Small causes, great effects!

Maxillary Tuberosity and the Maxillary Nerve***

Anatomy The maxillary tuberosity is a protrusion on the dorsal part of the infratemporal area of the upper jaw, containing three to four foramina for the alveolar nerves. Anesthesia of this tuberosity blocks the upper posterior molars, those branches of the maxillary nerve that supply the maxillary cavity, and the buccal mucosa above the teeth.

The maxillary nerve (second trigeminal branch) is a sensory nerve. It passes the foramen rotundum and travels down to the pterygopalatine (sphenomaxillary) fossa where it branches out. It innervates the skin of the maxillary region, the mucosa of the posterior paranasal sinus and palate, and the gum and teeth of the upper jaw.

Indications With an injection to the round protuberance at the backside of the maxilla we block those branches of the maxillar nerve (superior, posterior alveolar nerves) that supply the upper posterior molars and the maxillary cavity:

1. *Segmental therapy:* Disorders affecting the paranasal sinuses and ethmoid bone.
2. *Interference-field search:* Test injection when the paranasal sinuses are suspected as an interference field.

Materials 0.8 mm diameter × 80 mm-long needle.

Quantity 1 mL procaine solution.

Technique

a. Using a spatula or fingers, the cheek is pulled forward. The degree of the acute angle between needle and skin should be as great as possible. The needle is inserted directly behind the bony ridge between the zygomatic bone and the first molar or the anterior edge of the second molar. Applying plunger pressure and maintaining contact to the bone, the needle is advanced posteriorly and superiorly for another 30 mm. Bone contact has to be maintained and, before injecting, aspiration is necessary to prevent injection into the venous pterygoid (sphenoid) plexus.

b. A further means of reaching the trunk of the maxillary nerve is the injection to the → (T) pterygopalatine ganglion from the mouth.

c. *A simple injection to the maxillary nerve:* The entry point is half a fingers' breadth above the anterior quarter of the zygoma. The needle is inserted behind the zygoma and is then directed steeply down toward the center of the floor of the mouth, to a depth of 20 mm, 1–2 mL being injected.

Nasal Conchae*

Anatomy: With the injection into the lower and middle nasal conchae we reach the posterior nasal nerves that originate in the second trigeminal branch, parasympathetic fibers of the → (T) pterygopalatine ganglion, and sympathetic fibers of the → (T) upper cervical ganglion. They travel together to the nasal mucosa.

Indications

1. *Segmental therapy:* Disorders affecting the sinuses and ethmoid.
2. *Interference-field search:* Whenever there is a suspected interference field in the region of the nose or sinuses.
3. *Reflex-zone therapy:* Especially for therapy-resistant bronchial asthma, angina pectoris, headaches, and dysmenorrhea.

Reflex zones W. Fliess was the first to report about treatment of dysmenorrheal and nervous gastric disorders through anesthesia of the nasal concha. The Frenchman Leprince established that there are four areas of mucosa that act as reflex zones for the following organs:

- *zone 1: urogenital zone:* anterior third of the lower nasal concha; influence on uterus, ovary, ureter, anal and bladder sphincters;
- *zone 2: solar plexus zone:* middle portion of lower nasal concha; influence on stomach, liver, gallbladder and gut;
- *zone 3: cervical zone:* posterior (i.e., inner) third of lower nasal concha; cervical syndrome, dizziness, tinnitus, anxiety states, migraine;
- *zone 4: pulmonary zone:* anterior portion of middle nasal concha; asthma, pulmonary emphysema.

Leprince and others believed that various parts of the human organism could be reached therapeutically from related areas of the nasal mucosa. The theory of ear acupuncture (Nogier) considers that the inverted embryo is represented on the ear and that the entire body can be influenced in a positive sense from certain points of the ear. The theory of iris diagnosis is based on the assumption that the whole organism is reflected in the iris. Reflex-zone therapy, which concentrates on the soles of the feet, originated in South America. All these methods claim good results and tend to assert themselves to be universally applicable. I cannot believe in any rigid blueprint approach to living matter. As far as I am concerned, every living cell makes its contribu-

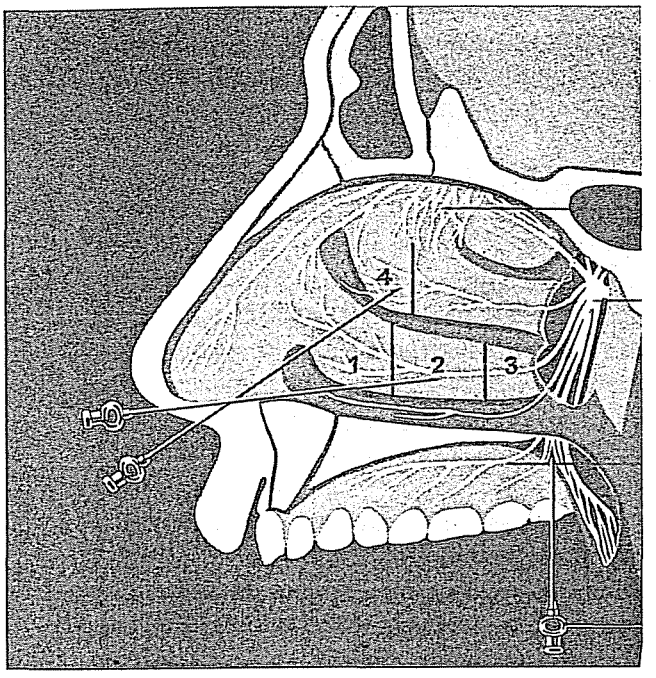


Fig. 3.**24** Injection into the nasal conchae: access to the pterygopalatine ganglion from the buccal cavity.

tion to the whole and has stored the plan of the entire organism in the same fashion.

Materials 0.8 mm diameter × 60–80 mm-long needle.

Quantity 0.5 mL.

Technique The patient sits on a chair with a neck support. If this is not available, the head must be held firmly! A speculum is inserted in the lower or middle nasal concha and the long thin needle is used to infiltrate the required areas by submucous injections. It is advisable to prepare the patient to expect the nosebleed that ensues and to give him or her a supply of paper tissues. He or she should remain seated for a period afterwards with their head held back. (See Fig. 3.**24**.)

In many cases the → (T) nasal spray described below or insertion of a cottonwool pad soaked in a mucosal anesthetic is likely to prove perfectly adequate and is preferable to an injection.

Nasal spray**

Anatomy With a nasal spray we are able to reach the posterior nasal nerves, parasympathetic fibers of the → (T) pterygopalatine ganglion, and sympathetic fibers of the → (T) upper cervical ganglion, which travel together to the nasal mucosa.

Materials Procaine cannot be used for anesthesia of the mucosa surface! Instead, 3–6 % (!) lidocaine solutions are used, for example, Xylocaine spray. Gingicaine M (tetracaine) and 2 % pantocaine must not be used in the case of para-group allergy. Anyone who does not possess a spray of any kind (including a pocket aerosol) can easily improvise with a spray-diffuser.

Indications For stopping acute rhinitis and sinusitis, chronic catarrh of the upper respiratory tract, dry irritative cough, silicosis, the start of influenza, certain forms of headache, and vasomotor dysregulatory disorders in the head (for example → cluster headache), dysmenorrhea, hiccoughs; also worth trying in rheumatoid spondylitis (Bechterew disease), asthma and angina pectoris. Also, for mobilizing the body's own production of ACTH, e.g., in antibiotic-resistant pneumonia.

According to F. Huneke, "anesthesia of the nasal and oral mucosa has its own range of indications and can sometimes still lead to success when injection has proved a failure." Anesthesia of the conjunctiva can alleviate the pain of ciliary neuralgia, and anesthesia of the eardrum can eliminate the onset of otitis media or mild tinnitus. Stubborn dry cough can be helped through surface application of a local anesthetic to the pharynx or the use of an anesthetic spray. Applying spray to the mucosa has an analgetic effect on injection points for testing teeth, eliminates the gag reflex in tonsil injections, removes pain from stomatitis and gingivitis, and allows these inflammations to heal faster. Knothe noted that some of the modern surface anesthetics (for example, Gingicaine and Xylestesin spray) also disinfect the mucosa.

Technique We use an anesthetic suitable for the mucosa, such as a 2 % Pantocaine solution or Gingicaine, and spray this on the nasal conchae and directly on the upper posterior pharyngeal wall into the vicinity of the pterygopalatine ganglion.

Often, simple surface anesthesia of the reflex zones inside the nose, using a cottonwool swab (on a stick) dampened with 2 % pantocaine or 1–4 % Xylocaine solution (e.g., Xyloneural), is all that is necessary. The swab should be left in place for 3–5 minutes. Leaving it longer does not increase the anesthetic effect.

Nerves

A local anesthetic can act on a nerve only when it has passed through the nerve sheaths of connective tissue. The nearer a nerve is located to the spinal cord and the thicker it is, the thicker will also be the connective tissue forming the sheath. The more a nerve ramifies and the thinner it becomes, the more readily accessible it is to the anesthetic. The best effect is obtained by → (T) quaddles in the skin, since the nerve fibrils lie completely free in the terminal reticulum. Since the effect is increased the nearer the preparation can be brought

to the nerve itself, we try to find the nerve directly. It will then produce its effect more rapidly and reliably, and with the smallest amount of local anesthetic. The pain-conducting C-fibers of the sympathetic system contain the least amount of myelin, are relatively poorly sheathed and are thus the first to be blocked by the local anesthetic, whilst the conductivity of the A- and B-fibers (for touch, pressure, and temperature sensation) continues to function for longer.

The perforation of a nerve produces an electric pain and radiates into the area supplied by the nerve, but does not usually persist. If the pain does persist, it disappears within a few days. After we have had to search blindly, the appearance of paresthesia shows us that the needle is in the right place.

Warnings have been given against endoneural injections of pharmaceutical preparations, because nerve lesions have been observed. But this does not apply to the use of local anesthetics (without additives!). "For the relief of certain painful syndromes, injections of Novovaine (procaine) can be given into the nerves without hesitation. The risk is so small as to be negligible and need not trouble us" (Leriche). Slow infiltration with constant plunger pressure reduces the amount of fluid that travels in front of the tip of the needle. This lowers the risk that this fluid damages smaller nerves and vessels as it pushes tissue aside.

There is one possible complication, however, that must be taken into account: the tip of the needle may become bent due to bone contact and form a barb, which can cause mechanical damage to a nerve when the needle is being withdrawn. We therefore use only sharp disposable needles, which are immediately replaced after brusque bone contact. Though injuries to the nerve cable caused by the needle generally do not produce loss of function, Killian recommends avoiding intraneural injections. Anesthetic deposits should be placed directly next to nerves only. Therapeutic injections into the trigeminal ganglion and the sciatic nerve he lists as exceptions to this rule.

1. Nerve-Exit Points on the Head

Overview

The nerve-exit points listed below will be explored over the following pages:

1a. supraorbital nerve, p. 315;
1b. infraorbital nerve, p. 316;
1c. maxillary nerve: see → (T) maxillary tuberosity, p. 313;
1d. mandibular nerve, p. 368;
1e. lingual nerve, p. 316;
1f. palatine nerves, p. 317;
1g. inferior alveolar and mental nerves, p. 317;
1h. occipital nerves, p. 317;
1i. superior laryngeal nerve, p. 318;
1j. glossopharyngeal nerve, p. 318.

1a. Injection to the Lateral Supraorbital Nerve***

Anatomy This is the terminal ramification of the first branch of the trigeminal nerve and forms the frontal and lacrimal nerves of the ophthalmic nerve, which supplies the sensory fibers to the upper eyelid and part of the forehead.

Indications Frontal neuralgia, frontal headache, twitching eyelids, heavy eyelids, styes, tarsal cysts, herpes zoster of the first branch of the trigeminal nerve, anosmia. In disorders affecting the frontal sinuses or ethmoid cells, this nerve-exit point is often pressure-sensitive and an anesthetic to this site can act as a healing stimulus on the cavities below; this is shown not infrequently by a heavy, cleansing catarrh.

Evidently there is a connection between the supraorbital nerve and the upper abdominal organs. As Ratschow has confirmed, the right supraorbital nerve becomes hyperalgetic in about a third of all gallbladder cases. When this happens, a procaine injection to this point stops all symptoms at a stroke, including colic pains. In gastric disorders we occasionally find the exit point over the left eye pressure-sensitive.

Materials Short, medium thick needle (size 12, 14, or 16).

Quantity 0.5 mL.

Technique By running the lateral edge of the left thumb along the supraorbital ridge, we find the supraorbital notch slightly medially of its center, through which this nerve reaches the surface. The thumb remains in position beside the notch on the inner third of the eyebrow. The needle is inserted with a short thrust in an upward direction in front of the thumbnail. A small arteriole surfaces together with the nerve in this notch and after-bleeding may occur or a hematoma may form. To prevent this, we let the patient apply pressure with a swab for a minute or two to the injection site. If there is no incisure, the nerve might exit through a small hole above the edge of the orbit, as indicated in Fig. 3.**25**; see also Fig. 3.**26**.

In acupuncture there is a further point in the center of the root of the nose. The two supraorbital points and this third point form the so-called frontal magic triangle, a term that expresses the almost magic effect they produce with regard to the indications given.

1b. Injection to the Infraorbital Nerve**

Anatomy The infraorbital nerve originates in the maxillary nerve. Before it reaches and innervates the skin of the anterior parts of the cheek, nostril, lower

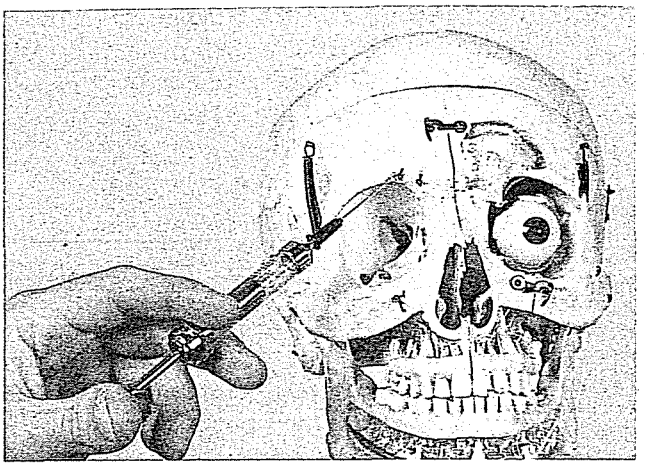


Fig. 3.25 Injection to the lateral supraorbital nerve.

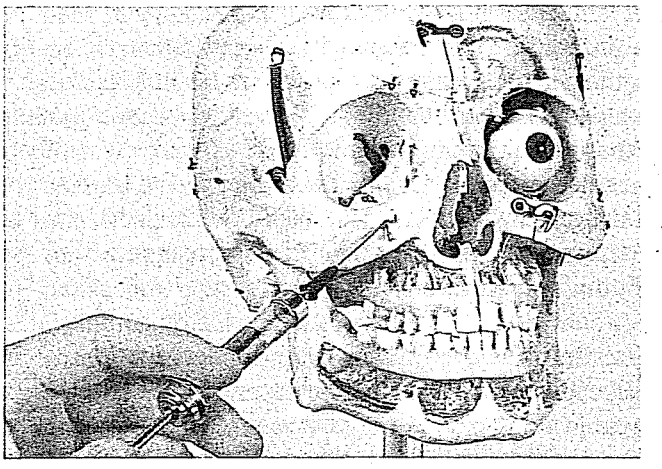


Fig. 3.27 Injection to the infraorbital nerve.

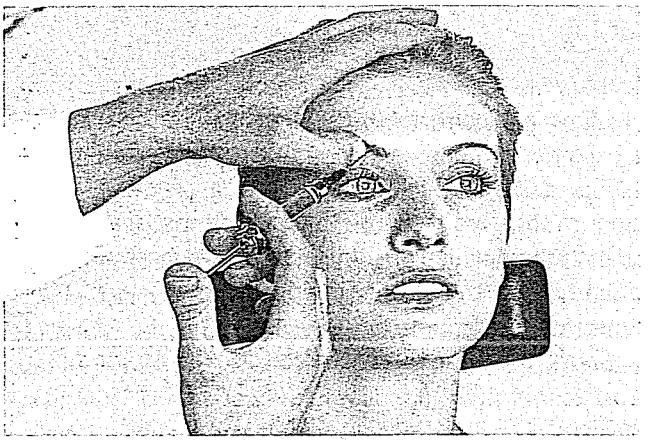


Fig. 3.26 Injection to the supraorbital nerve.



Fig. 3.28 Injection to the infraorbital nerve.

eyelid, and upper lip including its mucous membrane, it branches off into the superior alveolar nerves that innervate the teeth of the upper jaw and supplies the maxillary sinus where it ends.

Indications Trigeminal neuralgia, facial pains, furuncles of the cheek, disorders affecting the maxillary sinuses, supramaxillary "rheumatic" pain in the absence of pathological dental findings.

Materials Short, medium thick needle (size 12–16).

Quantity 0.5 mL.

Technique

a. *Through the skin:* If we pass the fingertip along the lower rim of the orbit downward from the inner canthus of the eye, there is at first a smooth section, followed by a slight curve, which runs to the lateral edge. Before we come to this curved section, we feel a roughness. Seven millimeters vertically below this point on the orbit is the infraorbital foramen. We insert the needle slightly below this and guide it obliquely upward in a medial direction until we touch bone. The injection is made there. (See Figs. 3.**27**, 3.**28**.)

b. *From the buccal cavity:* Lift the upper lip and insert the needle above the first premolar. The needle is then guided upward to the exit point of the nerve described in (a) above. The needle's position and progress can be felt through the skin.

1c. Injection to the Maxillary Nerve → (T) Maxillary Tuberosity (p. 313)

1d. Injection to the Mandibular Nerve (p. 368)

1e. Injection to the Lingual Nerve*

Anatomy The lingual nerve is a sensory and motor branch of the third trigeminal nerve (mandibular nerve). It travels along the inside of the mandible to the root of the tongue and reaches the bottom of the buccal cavity and the lateral edge of the tongue next to the lower wisdom tooth. It gives sensory supply to the two anterior thirds of the tongue, the internal gum of the anterior mandible, the posterior part of the bottom of the mouth, the tonsillar mucous membrane, and secretory supply to the submandibular

gland. The area along the center to the tip of the tongue is supplied by the hypoglossal nerve.

Indications Disorders of the tongue, all diseases of the mucous membranes and pain in the area that is supplied, Sjoegren's syndrome.

Materials Cartridge syringes or a needle (size 20).

Quantity 1–2 mL.

Technique We place a 1–2 mL submucosal deposit at the lingual side of the mandible, between wisdom tooth and tongue.

1f. Injection to the Palatine Nerves*

Indications These are given by the area supplied by this nerve: the greater palatine nerve supplies a fan-shaped area forming the greater part of the mucosa of the hard palate (excluding the area of the incisors); the minor palatine nerves supply the mucosa of the soft palate. All nerves contain sensory and secretory fibers.

Materials Size 14 or 16 needle or a corresponding needle for a cartridge syringe.

Quantity 1 mL procaine solution.

Technique These nerves pass out through the greater palatine foramen, which can be identified or felt with a round-headed probe as a small dimple in the mucous membrane medially to the posterior edge of the hindmost molar, on the boundary between the alveolar process and the roof of the palate. We inject 0.5–1 mL of procaine here (see Fig. 3.**24**).

1g. Injection to the Inferior Alveolar and Mental Nerves*

Anatomy The terminal ramification of the third branch of the trigeminal nerve issues through the mental foramen and supplies chin and lower lip. We inject here in trigeminal neuralgia, for pain in chin and lower lip, and for furuncles in this area. If, as described in technique (b) below, we inject perorally to the lingula, we produce conduction anesthesia of the teeth in the corresponding half of the lower jaw.

Materials Size 12–16 needle or a longer needle for a cartridge syringe.

Quantity 0.5–1 mL for (a); 2 mL for (b).

Technique

a. *Mental nerve:* The nerve exit is through the mental foramen, which is found below the lower premolars halfway between the alveolar edge and the lower edge of the mandible. In a toothless jaw, the mental foramen is located on the "pupillary line" (the vertical line through the pupil when looking straight forward), where we find the lateral supraorbital, infraorbital, and mental nerve. Since the foramen runs back laterally, it must be approached at this angle either directly through the skin or from the reflexion in the mandibular mucosa.

b. *Inferior alveolar nerve:* The patient must open his or her mouth wide. To find the entry point for mandibular anesthesia, first feel with the tip of the forefinger back along the buccal side of the teeth until the sharp edge of the anterior border of the ascending mandibular ramus is felt (oblique line). This is the site for starting the injection, i.e., about 10 mm above and buccally from the alveolar margin. The direction of the needle is given by a line connecting this point to the opposite angle of the mouth. The syringe thus lies in the region of the premolars on the opposite side of the mouth. The needle is inserted in a horizontal direction, i.e., parallel with the masticatory surface of the mandibular teeth. After anesthetizing the mucosa and under continual bone contact, we advance slowly another 15–20 mm along the medial side of the body of the mandible and inject about 1.5–2 mL of our solution to the lingula, a small bony projection. This will anesthetize the teeth and gums of the lower jaw, as well as the tongue from the tip to the linea terminalis, because the nearby lingual nerve is anesthetized as well.

1h. Injection to the Occipital Nerves***

Anatomy and indications The dorsal ramus of the second cervical nerve is primarily a sensory nerve. Its strongest branch, the greater occipital nerve, supplies the skin on the back of the head as far as the bregma and to the side as far as the temporal region and the back of the ear. The greater occipital nerve, especially, can be the site of origin of stubborn forms of neuralgia. Sensitivity to pressure at the exit point of the nerve often indicates dysfunction of the paranasal sinus area on the same side of the head (Adler, see → Fig. 1.**20** in Part I). We always include the nerve-exit point in the treatment of occipital headache and cervical syndrome. It often produces (through increased blood supply to the → vertebral artery) improvement of memory. This injection can also be helpful in conjunction with treatment of the stressed → thyroid before exams.

Materials About a size 12 needle.

Quantity 0.5 mL.

Technique Before giving this injection, the exit points of these nerves must be accurately located. The greater occipital nerve reaches the surface 20–40 mm from the midline, between the bony attachments of the trapezius and the semispinalis capitis muscles. It lies directly medially of the easily palpable occipital artery. After aspiration, we inject slowly and only moderate amounts, because some textbooks report the possibility that the local anesthetic travels in a retrograde way from the occipital artery into the internal carotid system.

1i. Injection to the Superior Laryngeal Nerve*

Indications Pain and dysphagia, especially in carcinoma or tuberculosis of the larynx, or in neuralgia, hoarseness, whooping cough.

Materials 0.8 mm diameter × 60 mm-long needle.

Quantity 5 mL.

Technique The superior laryngeal nerve divides at the level of the hyoid bone into an external and an internal branch. This is where it can be most easily reached. As a rule, it is desirable to deal with both sides at the same time, so we place a skin → (T) quaddle in the middle over the thyroid notch. We then pass the needle through this quaddle, going subcutaneously under control of the free forefinger in an oblique lateral and cranial direction towards the greater horn of the hyoid bone. Two milliliters of the solution are distributed immmediately adjacent to this in a caudal direction. The needle is withdrawn and the same injection repeated on the other side. This anesthetic reaches the epiglottis and the whole of the upper part of the inside of the larynx as far as the glottis. (See Fig. 3.**29**.)

1j. Injection to the Glossopharyngeal and Vagus Nerves*

Anatomy The cranial nerve IX consists of sensory, motor, and parasympathetic components. It supplies the pharynx, the soft palate, the posterior surface of the tongue, the tonsil, the eustachian tube, and the tympanic cavity. In addition, it also shares in the carotid sinus and carotid body through its secretory fibers: see → (T) Gasserian (otic) ganglion.

The cranial nerve X (vagus) has the same four fiber components as the cranial nerve IX. Together with the glossopharyngeal nerve, it provides motor and sensory supply for the pharynx. It is the only motor nerve for the larynx. It provides partial sensory innervation of the tympanic membrane, parts of the external auditory canal, and the external ear. It is the viscerosensory and parasympathetic nerve for the respiratory tract, beginning at the entrance to the larynx, for the gastrointestinal tract, from the entrance to the esophagus to the left colic flexure, for the kidneys, and the gonads. (See Fig. 3.**29**.)

Indications All disorders within the area supplied by these nerves, such as those affecting the tongue, glossopharyngeal neuralgia, atypical trigeminal neuralgia, dysphagia, cancer of the tonsils and malignancies of the tracheo-bronchial tree, hypertrophic osteoarthropathy (Marie Bamberger syndrome).

Materials 0.8 mm diameter × 50–60 mm-long needle.

Quantity 2–3 mL.

Technique The needle is inserted between the tip of the mastoid and the angle of the mandible, at right angles to the skin until bone contact is made with the styloid process. The local anesthetic is then distributed on the anterior side at a depth of 30–40 mm. The feeling of a lump in the throat, dysphagia and loss of sensation in the pharyngeal mucosa indicate blocking of the glossopharyngeal nerve.

If we infiltrate in a dorsal direction from the styloid process, we anesthetize the vagus nerve. Paralysis of the vocal cords, anesthesia of the base of the tongue, the posterior pharyngeal wall, and of the larynx, together with loss of the tracheal reflexes will persist until the anesthetic effect wears off. Frequently, both these nerves are blocked at the same time. The injection must never be given bilaterally, since in doing so there would be a risk of bilateral paresis of the recurrent nerve. Before giving the injection, the patient has to be informed that anesthesia of the glossopharyngeal nerve also numbs the mucous membranes of the pharynx. This produces the sensation of a lump in the throat and impairs swallowing. The patient needs to remain calm and continue to breathe without trying to swallow the lump.

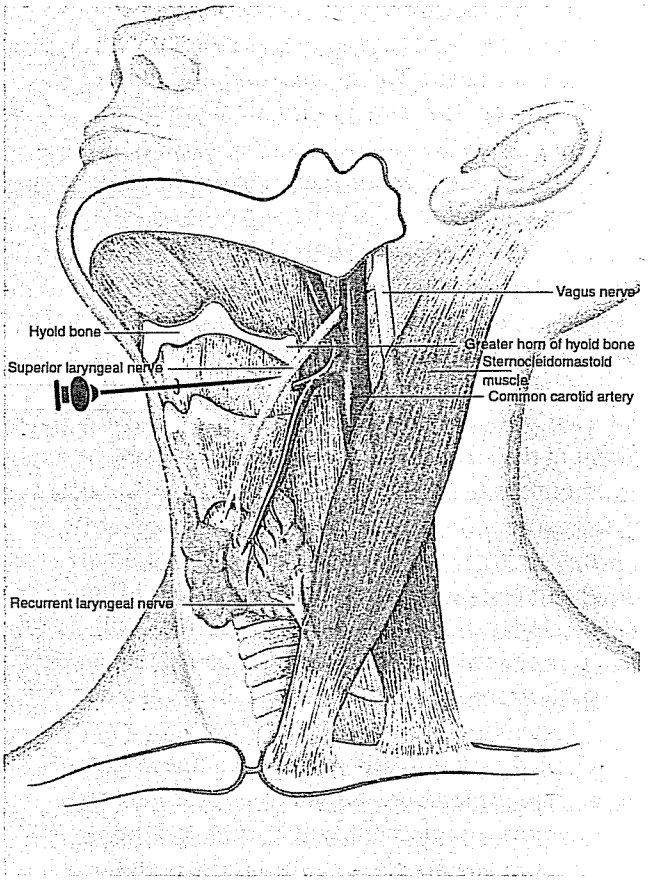


Fig. 3.**29** Injection to the superior laryngeal nerve.

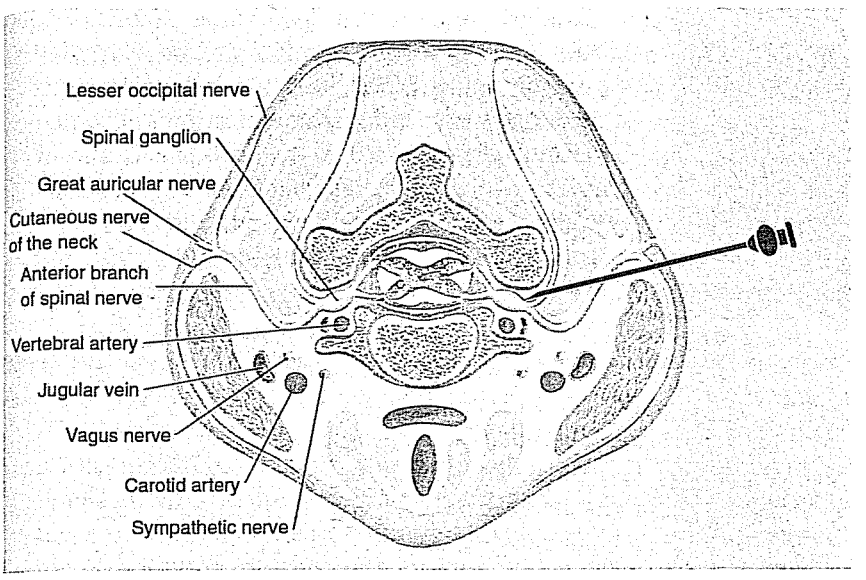


Fig. 3.**30** Section of the neck at the level of the cervical plexus.

2. The Cervical Plexus

Overview

The injections listed below will be covered in the following pages:

2a. injection to the roots of the cervical plexus, p. 319;
2b. injection to the superficial branches, p. 320;
2c. injection to the phrenic nerve, p. 320.

2a. Injection to the Roots of the Cervical Plexus*

Anatomy The anterior branches of the segmental nerves C1 through C4 form the cervical plexus. In addition to the diaphragm, its motor fibers supply the subhyoid muscles, the prevertebral muscles, the scalenes, and it has part in the trapezius supply. Its main area of supply is the anterior and lateral area of the neck, up to the area of the ear and the angle of the mandible and down to the second rib and slightly below shoulder level (acromion). The superior part is supplied by the greater auricular, lesser occipital, and cutaneous cervical nerves. The supraclavicular nerve supplies the inferior part. We can affect the superior area mainly by injecting at the third transverse process and the inferior area by injecting at the fourth transverse process. The third transverse process can be found at the angle level with the mandible and the fourth at the level of the upper edge of the thyroid cartilage. Since in the cervical region the intervertebral foramina face forward and not laterally as they do elsewhere, injury to the dura mater and the cervical cord is impossible if the needle enters from the side. If the head is turned sideways, the carotid artery, the internal jugular vein, and the vagus nerve are also displaced laterally and the way to the lateral processes is clear.

Indications Cervical syndrome, torticollis, neck pain, burning pain in the shoulder.

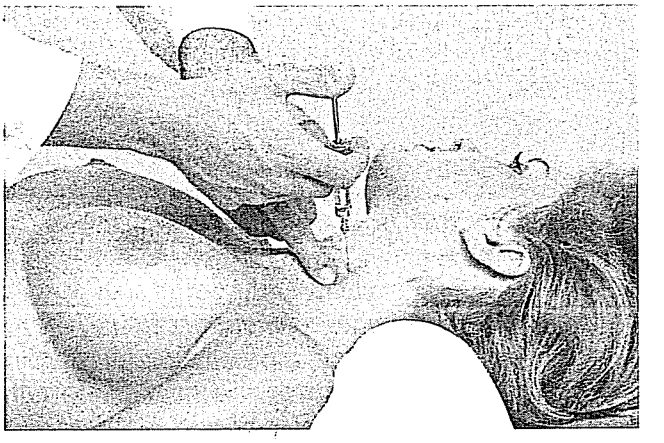


Fig. 3.**31** Injection to the cervical plexus.

Materials 40 mm-long needle.

Quantity 2 mL.

Technique The patient lies on their back, with a roll cushion under their neck. The head is turned to the side opposite to that of the injection. With the fingers of the left hand the sternocleidomastoid muscle is pressed forward and the needle is then inserted at its posterior border at the level of the angle of the mandible. At a depth of no more than 10 mm there is bone contact with the posterior tuberosity of the third lateral process. Without allowing the needle to slide further in, it is guided a few millimeters in a dorsal and caudal direction. Its correct location is indicated by the patient by paresthesia. After ascertaining that neither blood nor liquor is aspirated, inject 2 mL of procaine. The best insurance for avoiding complications is to remain strictly near the surface; in this case at the level of the bone! (See Figs. 3.**30**, 3.**31**.)

2b. Injection to the Superficial Branches of the Cervical Plexus**

The technically easier injection to the superficial branches of the superficial cervical plexus is preferable to the paravertebral block of the deep cervical plexus described above and, in many cases, this will be perfectly adequate, especially where the deep injection poses problems in patients with a short, stout neck.

Anatomy and indications See 2a. Injections to the Roots of the Cervical Plexus.

Technique The superficial branches of the cervical plexus surface directly behind the sternocleidomastoid muscle at a point that is called punctum nervosum. We find this point when we draw a line connecting the attachments of the sternocleidomastoid muscle to the mastoid and the clavicle. Bisect this line and insert the needle here, on the posterior edge of the muscle. At a depth of 10–20 mm we inject an area of 20 × 30 mm with 5 mL of a local anesthetic, while checking constantly through aspiration.

2c. Injection to the Phrenic Nerve*

Anatomy The phrenic nerve is the lowest branch of the cervical plexus. Its extrathoracic path runs between the sternocleidomastoid and the anterior scalene muscle. The left-hand phrenic nerve is preferred for this injection. It runs laterally from the aortic arch, pas- ses downward outside the pericardium to the diaphragm. The phrenic nerve transmits organic pain in disorders affecting the cardiac and abdominal regions to the shoulder, neck, and upper arm.

Indications Stubborn hiccoughs, severe pain radiating to neck and shoulders in organic abdominal and thoracic disorders; also worth trying in cases of diaphragmatic hernia.

Materials 0.6–0.8 mm diameter × 40 mm-long needle.

Quantity 2–5 mL.

Technique **Caution**: Never anesthetize bilaterally in the same session, because this would lead to total paralysis of the diaphragm! The patient turns his or her head away from the side of the injection and inclines it towards the injection. This relaxes the sternocleidomastoid muscle. The point of entry lies on the lateral edge of the muscle, about 25 mm above its attachment to the clavicle. The sternocleidomastoid muscle is held between thumb and forefinger immediately above the clavicle and is drawn in a medial direction, in order to force the carotid artery away from the phrenic nerve. The anterior scalene muscle can now be felt deeper down. The needle is then advanced under the drawn-away sternocleidomastoid muscle at right angles to the long axis of the body, i.e., almost parallel to the clavicle, obliquely in a medial direction, to a depth of about 30 mm. The finger lying medially on the sternocleidomastoid muscle is used to check the position of the needle as its point penetrates through the scalene notch at a sufficient distance from the trachea and esophagus. The injection is administered only after a negative aspiration test in two directions.

3. Upper Extremities

Overview

The nerves and techniques listed below will be discussed in the following sections:

3a. accessory nerve, p. 320;
3b. suprascapular nerve, p. 321;
3c. brachial plexus, p. 321;
3d. radial nerve, p. 323;
3e. median nerve, p. 323;
3f. ulnar nerve, p. 323.

3a. Injection to the Accessory Nerve*

Anatomy The accessory nerve (cranial nerve XI) has motor fibers only for the sternocleidomastoid and trapezius muscle. After exiting the skull, it divides into the internal branch, which turns into the vagus, and the external branch, which is the spinal accessory nerve. It travels to the sternocleidomastoid, which it generally perforates to travel oblique-laterally down through the lateral area of the neck. It arrives at the trapezius muscle. Together with cervical nerves, it supplies the trapezius.

Indications Unilateral tonic spasms produce → torticollis, spasmodic. Pain in the trapezius or sternocleidomastoid muscle that does not sufficiently respond to → intramuscular infiltrations.

Materials Needle: 40 mm, 0.6–0.8 mm thick.



Fig. 3.32 Injection to the accessory nerve.

Quantity 5 mL.

Technique 20 mm caudally to the tip of the mastoid the dorsal edge of the sternocleidomastoid can be palpated. This is the entry point from where we infiltrate the upper part of the sternocleidomastoid with 5 mL of a local anesthetic while slowly advancing the needle. The complete lack of tone indicates the correct placement of the anesthesia. (See Fig. 3.**32**.)

3b. Injection to the Suprascapular Nerve**

Anatomy The suprascapular nerve originates at C5 to C6. It runs under the transverse scapular ligament to the supraspinous fossa. There it divides into its branches, which supply the supraspinatus (abductor of the arm) and the infraspinatus (exterior rotator of the arm) muscles with their motor nerves. Both also have the function of tensioning the capsule of the shoulder joint. The sensory branch supplies the shoulder joint and its immediate vicinity. If the ligament that bridges the suprascapular notch ossifies, this nerve can become irritated, thus causing neuralgic symptoms of obscure etiology in the shoulder region.

Indications Vague, difficult-to-localize pains in the thoracic girdle and shoulder joint, suprascapular-notch syndrome, humeroscapular periarthritis; as supplementary injection to any treatment of the shoulder joint. Before reducing a dislocated shoulder, this injection should be given in addition to the intra-articular injection into the shoulder joint, and also to the supraclavicular brachial plexus (→ (T) nerves, see 3c under Injection to the Brachial Plexus) because the subscapular nerve also acts as capsular tensor. It should also be used in recurrent dislocation of the shoulder to improve the tone of the capsular tensors. It merely appears to be a contradiction that we use anesthesia of the suprascapular nerve with recurrent dislocations of the shoulder and with shrinking of the joint capsule. Regulation therapy with local anesthetics balances the function of regulation systems. This can be both tightening and loosening of the joint capsule.

Materials 60 mm-long needle.

Quantity 3–5 mL.

Technique We find the entry point by drawing a line along the spine of the scapula, bisecting this and setting a → (T) quaddle 20 mm cranially and 10 mm laterally from this point. A hyperalgetic point is always to be found here. We pass through the quaddle to a depth of about 20 mm towards the scapular notch until we make bone contact. We then use the point of the needle to probe for the soft tissue of the notch itself. We infiltrate 1–3 mL of our neural-therapeutic preparation here, and a further 1–3 mL is infiltrated laterally to an area about 30 mm wide whilst still maintaining contact with the supraspinous fossa, in order to block this nerve before it divides. If the needle has been sited correctly, the abduction and outer rotation of the upper arm will be put out of action while the anesthetic remains effective, and the patient will be unable to place his or her hand on the back of the head. (See Fig. 3.**33**.)

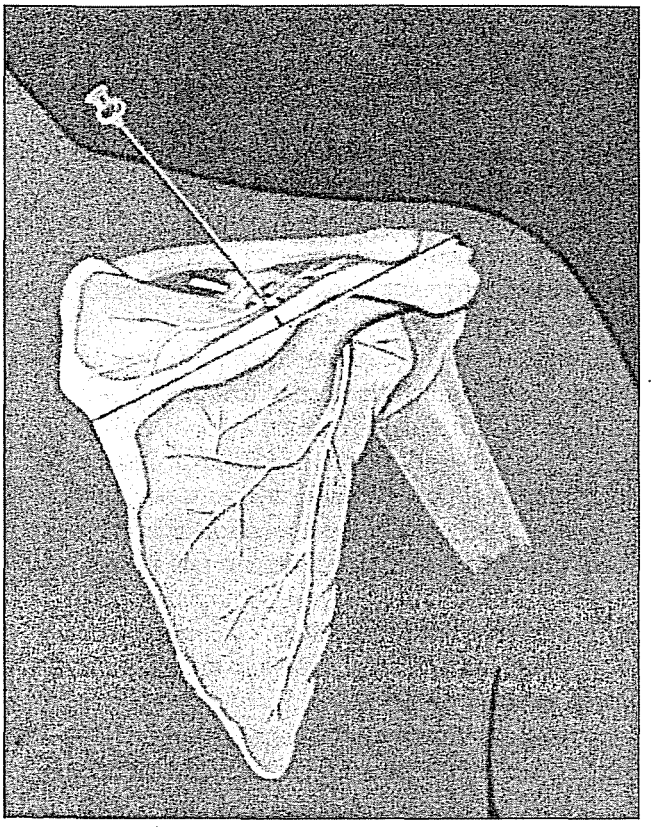


Fig. 3.**33** Injection to the suprascapular nerve.

3c. Injection to the Brachial Plexus C5 to T1**

Anatomy The brachial plexus has five different roots of different strength. They travel through the cranial part of the space between the scalenes, along the lateral triangle of the neck, downward between the first rib and the clavicle, and into the armpit, where they form three fascicles around the axillary artery. From the posterior fascicle, the radial and axillary nerve originate; from the lateral fascicle, the musculocutaneous nerve and the lateral roots of the median nerve originate. The medial roots of the median nerve, the ulnar nerve, and both superficial branches of the ulnar nerve of the upper arm and forearm originate from the medial fascicle.

Indications All types of plexus neuralgia and brachialgia, painful conditions of the arm (from the distal third of the upper arm) such as paresthesia, circulatory disturbances, post-traumatic osteoporosis, causalgia, phlegmons, abscesses, frostbite or burns in the upper extremities. This injection is also worth trying for writer's cramp, torticollis, therapy-resist-

ant epicondylitis, humeroscapular periarthritis, and cervical syndrome. Anesthesia of the supraclavicular plexus also facilitates reduction of a dislocated shoulder.

Supraclavicular Plexus Anesthesia

Materials A thin 40 mm-long needle.

Quantity 2 mL.

Technique The patient is seated on a chair with a neck support. The head is turned to the side opposite the injection and bent slightly forward. Before the needle enters, he or she must be warned to expect paresthesia, to avoid reflex defensive movements.

The entry point is 10 mm above the middle of the clavicle, very close to the pulsating subclavian artery, approximately in the direction of the spinous process of the third thoracic vertebra. At a depth of about 10 mm below this point the supraclavicular plexus passes subfascially over the first rib. (See Fig. 3.**34** for the position of the needle in the subclavian injection.)

The paresthesia felt by the patient indicates the position of the needle. The nerve pathways from the upper segments lie laterally and those from the lower segments more medially, so that as they are touched from a lateral position in a medial direction the paresthesia will present first in the shoulder, then in the radial side of the upper arm, the forearm, and the hand, further medially in the ulnar side of the hand, the forearm, and upper arm, and finally in the armpit. The radial nerve forming part of this plexus lies in a more posterior position. So, for example, if we first produce paresthesia in the little finger, the needle will be approximately in the middle of the plexus. It is in that case advisable to insert the needle to the left and right of this point and also to infiltrate there. Often, we need to probe with the needle several times here and there to search for the other points where we want to produce further paresthesia. These injections are useless if they fail to produce paresthesia!

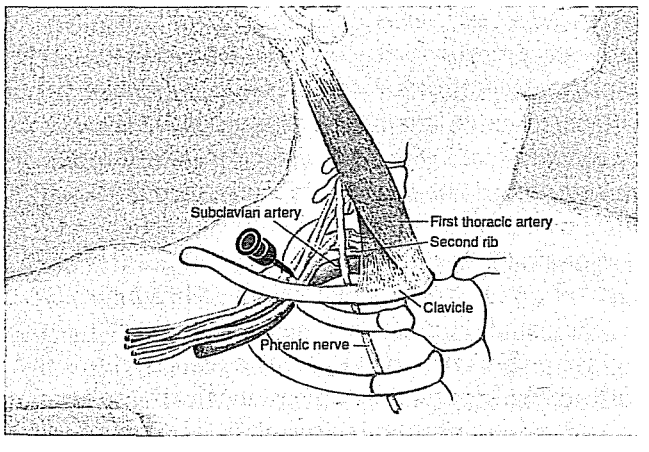


Fig. 3.**34** Anatomy and position of needle in the subclavian injection to the brachial plexus.

If the needle reaches the first rib in the absence of twitching in the patient's arm, this generally means that it is lying too far laterally! We need to stay close to the subclavian artery and go deeper by practically sliding it curvingly along its lateral edge until we reach the first rib. This is a safeguard against penetrating into the pleural cavity and piercing the apex of the lung. We need to note or mark the depth reached where bone contact is made, since we must not go deeper during our careful search for the individual strands of the plexus!

If an anesthetic of this plexus is accurately sited, there will be a temporary sensory and motor dysfunction affecting the brachial region. Especially when relatively large quantities of anesthetic are injected, the phrenic nerve may also become temporarily paralyzed; thus, simultaneous bilateral anesthesia of the supraclavicular brachial plexus should not be attempted. There is no risk to the patient if the subclavian artery is punctured. Even if the pleura is punctured, though this can always be avoided if we work carefully according to the procedure described above, it will normally simply produce a tight feeling in the chest, which will persist for a few hours or, very occasionally for as long as 2 or 3 days. Only very few cases of tension pneumothorax have been reported in publications; should this occur, it will, of course, call for in-patient treatment.

Axillary Plexus Anesthesia

Alternative terminology Axillary block.

This method is not so suitable for adipose patients, but it is absolutely foolproof. Palpate along the upper arm along the brachial artery toward the armpit to the point where the pulse is still just perceptible. A total of about 5 mL of procaine is now infiltrated above and below the artery. By this means, it is possible to reach the median, ulnar, radial, and musculocutaneous nerves. The correct location of the needle is shown by paresthesia in the distribution area of the three principal nerves for the arm and hand. Do not inject if no paresthesia is produced! The rapid draining of the anesthetic solution toward the periphery can be avoided by using a tourniquet. Intra-arterial injection of the brachial artery is not dangerous. Larger hematomas are avoided by pressing a cotton pad on the point of insertion for 1 minute.

Other Methods

See also → (T) stellate ganglion, method according to Dosch, for other means of reaching the upper parts of this plexus from the cervical region.

3d. Injection to the Radial Nerve*

Anatomy The radial nerve (C5 to T1) is located dorsally to the axillary artery, in the armpit. From there it spirals laterally around the posterior part of the humerus. In front of the lateral epicondyle it splits into the superficial and the deep branch. Its motor fibers supply the extensors of the upper arm and the forearm, the brachioradialis and the supinator muscle. Its sensory fibers supply the periosteum of radius and ulnar, the radial part of the back of the hand, thumb, index finger, and the radial side of the middle finger, except their distal phalanges. Paralysis of the nerve causes wrist drop.

Indications Disorders of the hand in the area supplied by the radial nerve.

Technique

a. Above the elbow, we can find the radial nerve by setting a → (T) quaddle four fingers' breadths in a proximal direction of the lateral epicondyle and inserting the needle through this perpendicularly to the skin. At this point the radial nerve runs parallel to the humerus. When the nerve is touched, the patient reports electric pains in the thumb and back of the hand. If we fail to find it immediately, we continue until bone contact is obtained and distribute up to 5 mL up and down along the bone.
b. If only the superficial branch is supposed to be affected, feel for the pulse of the radial artery about three fingers' breadths above the carpal sulcus. The needle is inserted radially of the artery. There would be no danger in an intra-arterial injection of up to 2 mL here. As always, we infiltrate as we advance the needle until the patient reports paresthesia and then deposit 1–2 mL at that point.
c. We block the area supplied by the branches of the superficial radial nerve by distributing 1–2 mL procaine or lidocaine solution in the dorsoradial region of the wrist at snuffbox level.

3e. Injection to the Median Nerve*

Anatomy In the neurovascular sheath, the median nerve (C5 to T1) travels downward, along the inside of the upper arm, in the medial bicipital sulcus, which is next to the brachial artery. On the flexor side of the elbow joint, it is located medially to the brachial artery. From there, it crosses in between the two heads of the pronator muscle, remains on the palmar side of the forearm, and reaches the palm through the carpal tunnel. Its motor fibers supply the flexors of the forearm (except the flexor carpi ulnaris and the ulnar part of the flexor digitorum profundus), the pronators of the forearm, the muscles of the thenar eminence (except the adductor pollicis muscle), and the lumbrical muscles. Its sensory fibers innervate the radial part of the wrist and palm, and the first three-and-a-half fingers. Paralysis of the median nerve causes benediction hand.

Indications For disorders of the hand (pain, paronychia, whitlow, vasospastic symptoms) in the area supplied by the median nerve; see → carpal tunnel syndrome. Other pressure damage through tourniquets, narcosis paralysis, and paravenous injection can occur. Try in cases of → writer's cramp.

Technique We find the median nerve in the antecubital fossa in an ulnar direction from the pulsating brachial artery. In the region of the wrist two tendons are tensed and clearly visible in volar flexion of the hand: the tendon of the palmaris longus muscle and directly radially to it the one of the flexor carpi radialis muscle. The needle is inserted distally, no more than 20 mm deep, between the two tendons, on the level of the ulnar styloid process, into the carpal tunnel. If the tendon of the palmaris longus muscle is missing (which is the case in 25 % of people), the needle is inserted radially to the one existing tendon. As soon as paresthesia occurs in the median region, we infiltrate 1–2 mL of local anesthetic.

In patients presenting with a carpal tunnel syndrome, no more than a few tenths of a milliliter (0.1–0.3 mL) should be injected, in order not to exert yet more pressure on a nerve already damaged by compression. In such cases it is preferable to find this nerve further away from the point of constriction, about three fingers' breadths above the intra-articular space.

3f. Injection to the Ulnar Nerve*

Anatomy The ulnar nerve (C8 to T1) perforates the medial intermuscular septum approximately one hand's breadth proximally to the elbow joint. This brings it from the medial bicipital sulcus to the extensor side of the arm. It is located behind the medial epicondyle, directly between bone and skin. Pressure applied over this point easily causes paresthesia to the area that is supplied by this nerve (funny bone). From here, while covered by the flexor carpi ulnaris muscle, which it supplies, it wraps around to the tensor side. Along this way it sends a muscle branch to the ulnar part of the flexor digitorum profundus, one skin branch to the skin of the hypothenar, and one skin branch to the skin on the back of the hand and its fingers.

When proximal to the wrist of the hand, the nerve is located directly next to the tendon of the flexor carpi ulnaris muscle. From there, it travels, superficially to the flexor retinaculum, then to the root of the hypothenar, where it diverges and continues as one skin and one muscle branch. The skin branch supplies palmarly one-and-a-half ulnar fin-

gers, the muscle branch supplies the entire hypothenar, the seven interosseous muscles, both ulnar lumbrical muscles, and the deep thenar muscles (adductor pollicis, deep head of the flexor pollicis brevis). Paralysis of the ulnar nerve causes claw hand.

Indications Disorders affecting the area supplied by this nerve (flexor carpi ulnaris muscle, parts of the ulnar digital muscles, and skin areas in the region of the forearm and fingers), complaints of cyclists and motorcycle racers after long rides; see also → scalene syndrome.

Technique

a. Between the medial humeral epicondyle and the olecranon lies the ulnar sulcus, which can be readily located by palpation. The ulnar nerve can be easily anesthetized in this sulcus, at a depth of 10–20 mm.
b. The nerve can be found if the needle is inserted about three fingers' breadths above the wrist joint between the ulnar artery and the tendon of the ulnar flexor muscle of the wrist, which lies in an ulnar direction from the artery. When we have produced paresthesia, we inject 1–2 mL procaine.

4. Lower Extremities

Overview

The injection techniques listed directly below may be found on the following pages:

epidural anesthesia, p. 298;
lumbar sympathetic chain, p. 363;
sciatic nerve, p. 344;
presacral infiltration, p. 334.

The techniques listed here may be found in the pages that follow:

4a. femoral nerve, p. 324;
4b. lateral cutaneous femoral nerve, p. 324;
4c. obturator nerve, p. 325;
4d. peripheral nerves in the region of the ankle joint, p. 325;
4e. ring-block anesthesia (fingers and toes), p. 326.

Addendum

4f. pudendal nerve, p. 327.

4a. Injection to the Femoral Nerve**

Anatomy The femoral nerve (L1 to L4) provides motor supply to the sartorius and quadriceps (knee extensor) muscle. If it is compromised, the patellar tendon reflex is weak and it is hard on the patient to climb stairs. It also disturbs sensitivity on the anterior and medial part of the thigh, the medial area of the knee, and the inside of the lower leg.

Indications Neuralgia and paresthesia in the area that it supplies, causalgia, vascular disorders, circulatory disturbances, sports injuries when rapidly overstretching the hip joint. If the infrapatellar branch of the saphenous nerve (terminal branch of the femoral nerve) is irritated, it may produce hyperalgesia or loss of sensation over the patella or in a more cranial direction from this at the nerve-exit point from the femoral canal, and may also be accompanied by tenderness when pressure is applied over the medial joint space of the knee.

Materials Needle: 40 mm long.

Quantity 2–5 mL.

Technique The technique used for this is described in the section dealing with the → (T) femoral artery, the injection being usually combined. The pulsating artery is found by palpation just below the inguinal ligament, the nerve lying about 10–25 mm laterally from the artery. The patient needs to be prepared that when the needle touches the nerve, paresthesia occurs in the region supplied by it (anterior surface of the thigh), which feels like a light electric shock. Partial anesthetic block of the femoral nerve inhibits motor function of the quadriceps femoris muscle, with corresponding gait disturbances during the anesthesia. This also needs to be communicated to the patient before treatment.

4b. Injection to the Lateral Cutaneous Femoral Nerve*

Anatomy The sensory lateral cutaneous femoral nerve is composed of fibers from L2 and L3. It runs from the lumbar plexus via the inside of the iliacus muscle diagonally down and forward. It perforates the inguinal ligament one fingers' breadth medially to the anterior iliac spine. On the outer aspect of the thigh, some of its branches perforate the fascia lata and supply the skin from the lateral aspect of the thigh as far as the knee. Any toxic or mechanic irritation affecting the cutaneous nerve will produce painful paresthesia accompanied by sensation of soreness, tingling, or stabbing pain on the outer aspect of the thigh. Extension inhibition of the leg due to pain may occur. This disorder is generally known as paresthetic meralgia.

Indications Meralgia.

Materials 40 mm-long needle.

Quantity 2–5 mL.

Technique First, we search for the primary pain site through palpation. It is located 10–25 mm in a medial and caudal direction from the anterior superior iliac spine. We place one quaddle at this point. The needle is advanced in the direction of the iliac spine by infiltrating until bone contact is made with the pelvis. Before reaching the bone, the resistance of the fascia lata has to be overcome. The exit point

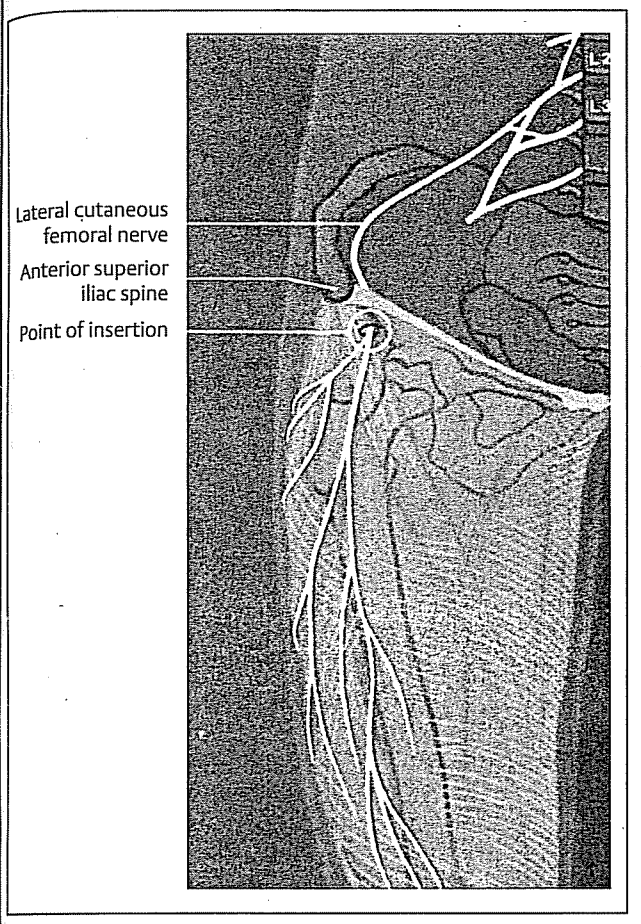


Fig. 3.**35** Injection to the lateral cutaneous femoral nerve.

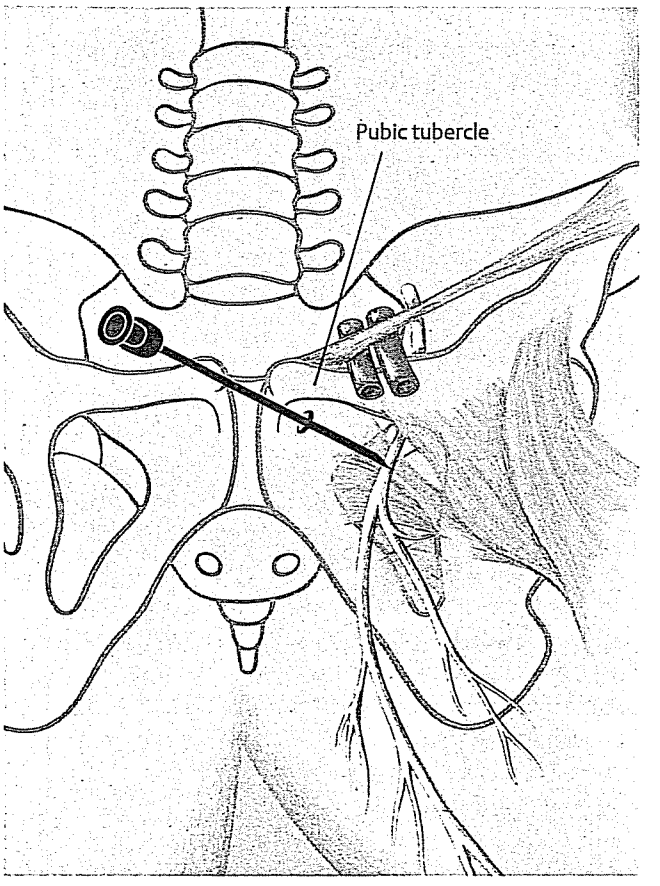


Fig. 3.**36** **Injection to the obturator nerve.** Anatomical relationships and position of needle.

from the fascia is not always in the same place for all patients, and the solution must therefore be distributed subcutaneously and subfascially. This will not produce paresthesia (see Fig. 3.**35**).

4c. Injection to the Obturator Nerve**

Anatomy The obturator nerve (L2 to L4) reaches the thigh via the upper part of the obturator foramen. It supplies parts of the hip joint, the adductors, the gracilis muscle, and parts of the knee joint. It terminates in the medial cutaneous femoral nerve and provides the sensory fibers to the inside of the thigh.

Indications Arthrosis of the hip and knee, neuralgia of the obturator nerve, adductor spasms, gracilis syndrome.

Materials 1 mm diameter × 80 mm-long needle.

Quantity About 5 mL.

Technique The patient lies on their back and rotates their thigh outward as far as possible. Palpate in a lateral direction from the symphysis pubis to locate the pubic tubercle and insert the needle about 25 mm caudally of this. The needle is first guided at right angles to the skin until contact is made with the horizontal branch of the pubic bone. It is then withdrawn slightly and advanced further in a lateral direction along the lower edge of the horizontal ramus and introduced into the obturator foramen. The needle will encounter bone at the point where the horizontal branch of the pubic bone turns into the descending branch of the ischium. It is now near the obturator nerve. When this is touched, the patient will indicate paresthesia in the region supplied by this nerve, above all in the anterior part of the hip joint and in the region of the adductor muscles. Following the injection of about 5 mL of solution, temporary paralysis of the adductors may occur and will indicate that the injection has found its mark (see Fig. 3.**36**).

4d. The Peripheral Nerves in the Region of the Ankle Joint*

Indications Following injury, pain, circulatory disturbances, paresthesia, itching, and eczema in the region supplied by these nerves.

Materials 40–60 mm-long needle.

Quantity 1–5 mL.

Anatomy and technique The sole and heel of the foot are supplied mainly by the tibial and sural nerves:

a. *Tibial nerve:* In the tarsal-tunnel syndrome accompanied by pain on the sole of the foot, sensory loss in the toes and in severe cases by ham-

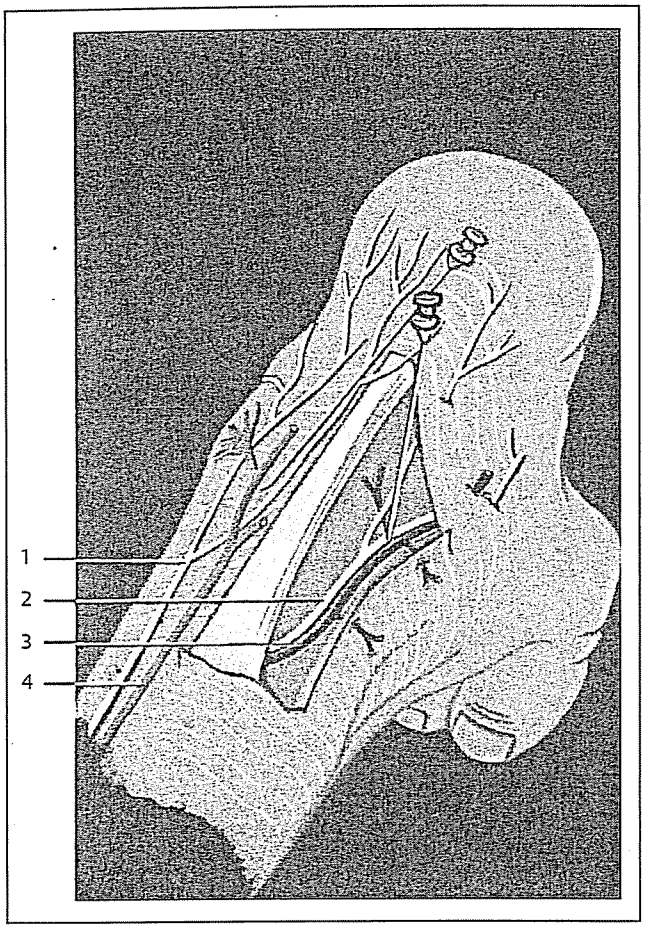


Fig. 3.37 **Injection to (a) tibial and (b) sural nerves.**
1. Sural nerve
2. Tibial nerve
3. Posterior tibial artery
4. Small saphenous vein

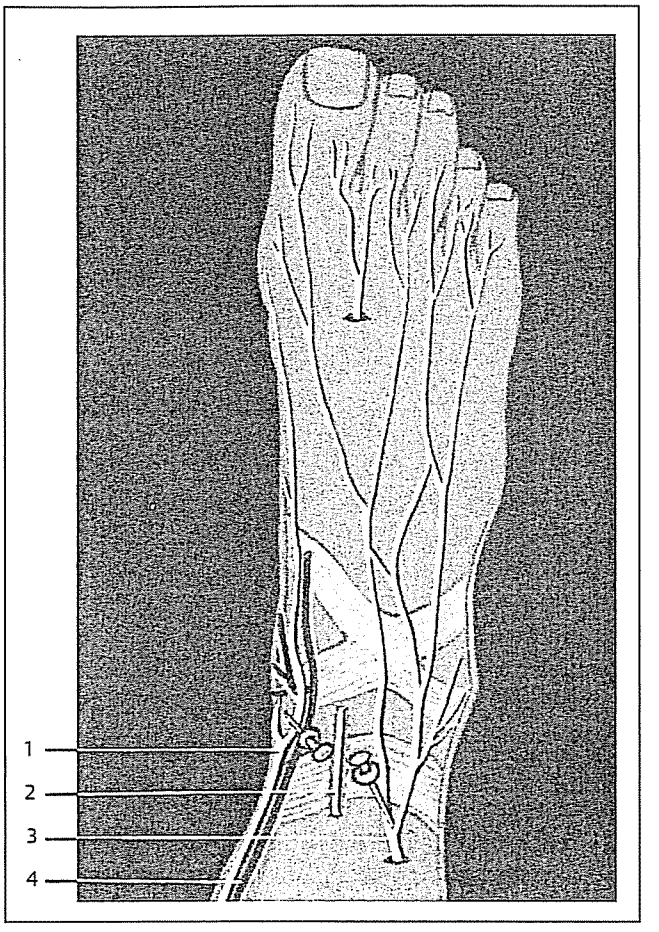


Fig. 3.38 **Injection to (c) fibular and (d) saphenous nerves.**
1. Saphenous nerve
2. Deep fibular nerve
3. Superficial fibular nerve
4. Great saphenous vein

mer toes. The patient lies face down. At the level of the upper part of the medial malleolus, the posterior tibial artery can be felt immediately adjacent the Achilles tendon. We set a → (T) quaddle and insert the needle vertically so that its point will come to lie immediately adjacent and lateral (i.e., dorsal) to the artery, where we inject 2–4 mL. If the tibial nerve needs to be blocked more cranially, it can easily be done in the center of the back of the knee.

b. *Sural nerve:* This nerve is formed by the junction of a branch of the tibial nerve with the common fibular nerve; it supplies the heel and the adjacent part of the sole of the foot. It is reached by the subcutaneous infiltration of about 2 mL procaine into the region between the Achilles tendon and the lateral malleolus.

c. *Superficial fibular nerve:* If we wish to treat the dorsum of the foot as far as the toes (with the exception of the lateral half of the big toe and the adjacent half of the second toe, which are innervated by the deep fibular nerve), we locate the superficial fibular nerve subcutaneously, at the level of the ankle joint, between the anterior edge of the tibia and the lateral malleolus. There we distribute about 2 mL.

d. *Saphenous nerve:* This terminal branch of the femoral nerve supplies the area around the medial malleolus and the leg above it. In this case, we again infiltrate only subcutaneously in the area around the great saphenous vein, immediately above the medial malleolus. This is sufficient to block the nerve. After knee surgery, the infrapatellar branch of the saphenous nerve can be irritated. Through infiltration of the scar and repeated injections to the nerve, follow-up neurosurgery can often be avoided. (See Figs. 3.**37**, 3.**38**.)

4e. Ring-block Anesthesia of Fingers and Toes***

Indications Paronychia, disorders affecting joints etc. of fingers and toes.

Materials About a size 12 needle.

Quantity No more than 1 mL on each side. (**Caution:** vasoconstrictor additives!)

Technique Infiltration of finger and toe nerves can be done without problem at the base, injecting 0.5 mm

to the digiti dorsales or palmares proprii nerves. The needle is inserted at both sides of the base of the finger, somewhat nearer the extensor aspect. From there, 0.5 mL of a suitable local anesthetic is distributed on the extensor and the same amount on the flexor aspects. The method is the same for the toes, but there, in addition, a third injection site in the middle of the extensor aspect is recommended. (See Fig. 3.**38**.)

Addendum

4f. Injection to the Pudendal Nerve**

Anatomy The pudendal nerve (S2 to S4) is the most important sensory nerve of the perineum. After leaving the pelvis through the greater sciatic foramen, it winds around the ischial spine or the sacrospinal ligament and reaches the perineal region through the lesser sciatic foramen. Together with the internal pudendal vessels, it runs in postero-anterior direction, laterally to the ischiorectal fossa, from which it is separated through the thick fascia of the internal obturator muscle, into Alcock's canal. It forms the rectal nerves for the skin and muscles of the anus and finally branches off into the muscular branches of the urogenital diaphragm and the muscles of the spongy body, into the perineal branches of the skin of the posterior scrotum or the labia majora, and into the dorsal penile or clitoral nerve.

Indications Anal and vulvar pruritus; disorders affecting the scrotum, penis, vulva, and perineum; deep-seated "backache," coccygodynia and pudendal neuralgia, especially if in vaginal examination the region of the ischial tuberosity is found to be pressure-sensitive. In obstetrics, this injection is also used to relieve pain during the second stage of labor, for vacuum extraction or high forceps delivery, for episiotomy and perineal suture.

Materials Needle for (a) 100–120 mm-long × 1 mm diameter, (b) 60–80 mm × 0.8 mm, for (c) PP needle.

Quantity From 5–10 mL.

Technique

a. I have found a way to reach the pudendal nerve, also in a male patient. The needle insertion is identical to the one for the injection to the sacral plexus (see p. 348 and Fig. 3.**60**). We draw two lines to find it:
   - The greater trochanter is located one hand's breadth inferior to the iliac crest, palpable directly under the skin. Three fingers' breadth cranially and deep to it, we find the upper edge of the bone. From there, we draw a horizontal line to the gluteal fold.
   - In addition, we draw a vertical line from the lateral depression of the Michaelis rhomboid (superior posterior iliac spine, the protruding, dorsal end of the iliac crest) down to the lateral edge of the ischial tuberosity. The insertion point is located at the intersection of the two lines. Different from the injection to the sacral plexus, we do not advance the needle sagittally, but medially toward the symphysis, until the patient notices paresthesia in the genital area. After negative aspiration test, we inject 5 mL.

b. *Perineal method:* The patient lies on the gynecological couch in the lithotomy position. The ischial spine is found by palpation in a lateral direction either from the vagina or the rectum. The finger is kept in place and guides the needle, which has been introduced transcutaneously adjacent to the vagina (in a male patient at the corresponding location) until it reaches this point. We advance with an 80–100 mm-long needle through a quaddle, guided by the palpating finger, to the ischial spine. Aspiration tests (pudendal artery) are made and the local anesthetic preperiosteally infiltrated around the spine, especially on its lateral and dorsal face. Some of the local anesthetic is then deposited in an anal direction from this and more of it is infiltrated into the ischiorectal fossa, medially from the ischial tuberosity. Injecting in a dorsolateral direction, the sacrospinal ligament is perforated and a further amount of 5 mL is deposited 10 mm beyond this. In this procedure, the posterior cutaneous femoral nerve is also anesthetized.

c. *Transvaginal method:* The patient lies as in (b) above. For this injection it is possible to obtain needles with a protective sleeve. The sleeve enables the needle to be guided directly to the ischial spine. The needle penetrates the mucosa and the ligament immediately adjacent to the spine. After aspiration, 5 mL solution are injected at a depth of 15 mm. (See Fig. 3.**39**.)

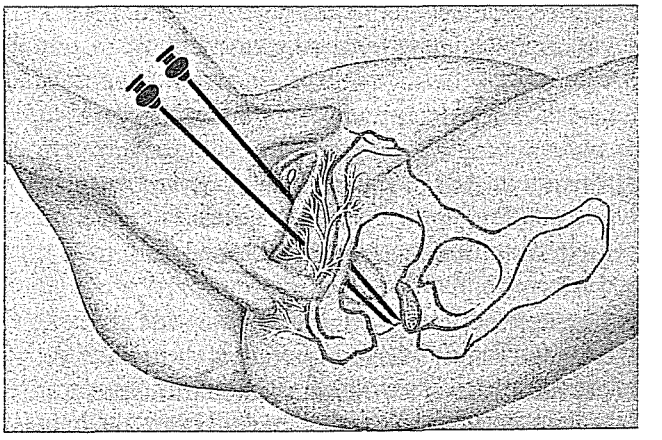


Fig. 3.**39** **Injection to the pudendal nerve.** Diagram of perineal and transvaginal methods.

Oval foramen See → (T) Gasserian (otic) ganglion and mandibular nerve (p. 368).

Para-arterial injection See injections to the → (T) afferent arteries (p. 289).

Paranasal Sinuses*

In addition to the injection of the nasal conchae, we also have the possibility of injecting from the mouth to the → (T) maxillary tuberosity and to the maxillary nerve as also described there. From outside we can reach the maxillary sinus either by injections to the exit points of the → (T) supra- and infraorbital nerves or upward to the periosteum of the maxillary reflexion of the mucous membrane at the alveolar margin, and intra-orally through the palate to the floor of the maxillary sinus (palatine nerves, Fig. 3.**24**). The most important injection is that to the → (T) pterygopalatine ganglion.

Paranephral injection See abdominal → (T) sympathetic chain.

Parasacral injection → (T) presacral infiltration (p. 334).

Paravenous injection → (T) intravenous procaine injection (p. 304).

Paravertebral Anesthesia*

Alternative terminology Nerve block of thoracic or lumbar spinal nerves, paravertebral root block; lower lumbar paravertebral anesthesia to the area of the sciatic root (→ (T) sciatic nerve), according to Reischauer.

Anatomy When entering the intervertebral foramen, coming from the spinal canal, the fibers of the anterior motor roots unite with those of the posterior sensory roots, forming in the intervertebral foramen the short trunk of the segmental nerve with (functional part of the posterior root) the spinal ganglion. Liquor space and dura end here. The dura turns into the perineural sheath of the peripheral nerves. Directly at the exit point from the intervertebral foramen, the trunk of the segmental nerve divides into four branches:

- the anterior branch for muscles and skin of the anterior and lateral wall of the trunk of the body;
- the posterior branch for the autochthonic muscles of the back and one area of skin of the back;
- the thin meningeal branch (sinuvertebral nerve), that runs along spinal canal; and
- the (sometimes divided) white communicating branch that runs to the sympathetic trunk and sends off the gray communicating branch, which connects with the nerves that travel to the wall of the trunk.

Beginning at T12, the anterior branches are part of the formation of the lumborsacral plexus and serve primarily the supply to the legs. If the segmental nerve is temporarily blocked at the point of its exit from the intervertebral foramen, all fibers of the segment are blocked.

Indications

1. *Diagnostic indications:* This injection enables us to block the spinal nerves issuing from the intervertebral foramina, including the sympathetic fibers. This provides us with the means for a differential diagnosis to determine the spinal segment and thus the organ to which the pain reported by the patient should be assigned, and thus enables somatic and autonomic (e.g., cardiac) pain to be diagnosed on a differential basis. Since the level of the spinous process does not necessarily correspond with the level of the segment concerned, it is advisable to refer to Fig. 1.**17**, Part I on page 70. The main segmental innervation of the abdominal organs is provided by the following:
   stomach: T7 to T8 left;
   liver and gallbladder: T9 to T10 right;
   pancreas: T8 to T10 left;
   kidney: T12 and L1;
   ureter: L2 to L4.
2. *Therapeutic indications:* The therapeutic possibilities of a selective organ-segment therapy are given by what has been stated above. With the paravertebral infiltration we can block the spinal nerves, including the pathological reflexes in the corresponding areas (dermatoma, myotoma, enterotoma), at their exit points. Thus, anesthesia in the region T12 to L1 is used in treating disorders of the kidneys, such as anuria and acute renal failure or oliguria due to spastic or hypertensive causes. In cases of renal or ureteric calculi, anesthesia in the region of L2 to L4 can considerably help the elimination of the calculi! We also use this anesthesia of the spinal nerves for all painful symptoms in the intercostal region, for example, in herpes zoster neuralgia, after fractures of vertebrae or ribs, to relieve pain due to malignancies; also for post-operative pain following abdominal surgery, and for pain in the lumbar, renal, and groin regions, when the diagnosis does not call for other measures.

Materials 1 mm diameter × 80–100 mm-long needle.

Quantity 5 mL. For paravertebral root anesthesia, it is preferable to use local anesthetics from ampules

rather than multiple dose vials, to avoid the preservatives that can cause local irritation, and, if inadvertently injected into an abnormal extension of the dura and subarachnoidal space along the nerve (root diverticuli), can cause cerebral irritation.

Technique It needs to be considered that the spinous processes point downward, beginning with the process of the fourth throracic vertebra. From there, the tip of the spinous process corresponds to the level of the nerve segment below. For example, at the level of the spinous process of the ninth thoracic vertebra, we block the tenth nerve segment.

In each segment, a → (T) quaddle is set 30–40 mm laterally of the line formed by the spinous processes. The vertebra prominens and the lower edge of the 11th rib provide a useful surface mark for orientation for this purpose. The spinous process of the seventh thoracic vertebra lies on the line connecting the two tips of the shoulder blades. From the entry point we pass forward exactly in a sagittal direction. To avoid the intercostal artery we keep hard against the upper edge of the rib and the lateral process. After losing bone contact the needle needs to be advanced another 20–25 mm in order to reach the spinal ganglion and its communicating branches. In this region we move the needle back and forth whilst distributing 4–5 mL in each segment. The likelihood of entering the dural cavity in doing so is very remote. Despite this, we aspirate before the injection and whenever we change the position of the needle, especially in a medial direction, in order to make certain that neither blood nor liquor is being drawn into the syringe (Fig. 3.**43**).

If a shooting pain in the foot occurs as the needle is advanced, the nerve root was struck. This has no negative side-effects, and is done intentionally during → (T) sciatic nerve treatment.

Possible complications Paravertebral injections in the region of the cervical spine are not without risk and are best avoided. In this area, it is preferable to use the far better injection to the → (T) stellate ganglion according to Dosch. For consequences of meningeal puncture and intrathecal injection, see pages 355.

Pelvic Region***

"Pelvic region" is no anatomical terminology. We use it to describe the functional and pathogenetic unit of uterus, adnexa, and bladder.

Indications:

1. *Segmental therapy:* Endo- and parametritis, dyskinesia of the genital organs, dysmenorrhea, menorrhagia and metrorrhagia, non-specific vaginal discharge, cervical catarrh, abdominal pain and backache, autonomic pelvic disorders, sensation of pressure without prolapse; also in constipation and meteorism, dyspareunia, neuritis of the pelvic floor, vomiting in pregnancy, menstruation-related disorders (such as headaches, migraine, mastodynia, exacerbation of skin disorders such as acne or facial dermatitis, abnormal irritability or depressive moods), genital pruritus, sterility, and frigidity, insofar as these disorders are segmental in origin and not due to an interference field. In many cases, we give additional injections into the → (T) thyroid.
2. *Interference-field search:* As a test injection in extragenital disorders of all kinds, if the patient's history includes genital disturbances, discharge, abortion, D&C, termination of pregnancy, difficult labor, gonorrhea, pelvic inflammatory disease; also, surgical operations of all kinds involving the external and internal genitals. Even normal delivery can result in an interference field, since enlargement of the uterus leaves histologically ascertainable scars from aseptic necroses. In a surprising number of cases one finds that interference-field disorders originating in the genitals tend to occur after the second labor (Speransky's second insult or trigger factor).

Contraindications None! Menstruation is a physiological process, not a contraindication.

Materials 0.8 mm diameter × 60–90 mm-long needle.

Quantity Two doses each of 1–2 mL.

Technique Preceding the first injection, the patient requires thorough gynecological examination because the technique might have to be adjusted to the palpation findings (for example, prolapse of uterus and vagina, myomatous uterus, adnex tumors such as large cysts, etc.). The routine examination also includes palpation of the posterior symphyseal walls, the entrance points of the → (T) pudendal nerve at the ischial spine, and rolling of an abdominal fold to locate hyperalgesic points of the peritoneum (→ (T) preperitoneal infiltration). Because scars in the segment have to be injected as well, one has to search and inquire about possible impalement traumas and episiotomy scars, vaginal tears (forceps, coital injuries, stupration), surgery scars, vaginal cysts, Bartholin's abscess, episioperinioplasty, portio surgery, cervical tear, hysterectomy scars, etc.

W. Huneke's technique from 1934 offers a little difficulty only to the beginner; the description makes it seem more complicated than it is in practice! Before the injection, the patient should empty her bladder. She then lies on her back. The point of entry is found about four fingers' breadths laterally from the symphysis, i.e., about two fingers' breadths medially from the pulsating femoral artery (and laterally from the inferior superficial epigastric artery) in the region of the upper limits of the pubic hair. If

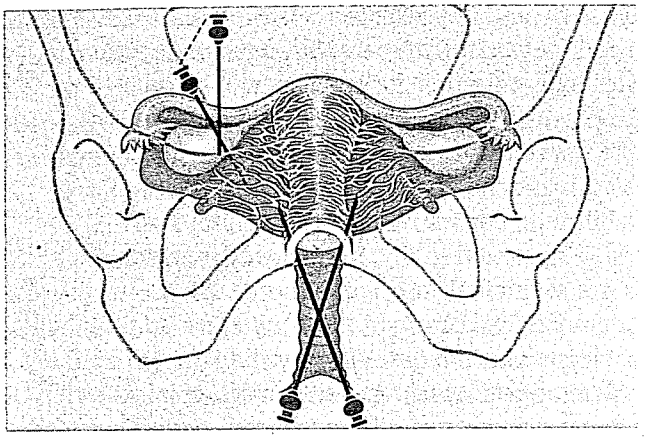
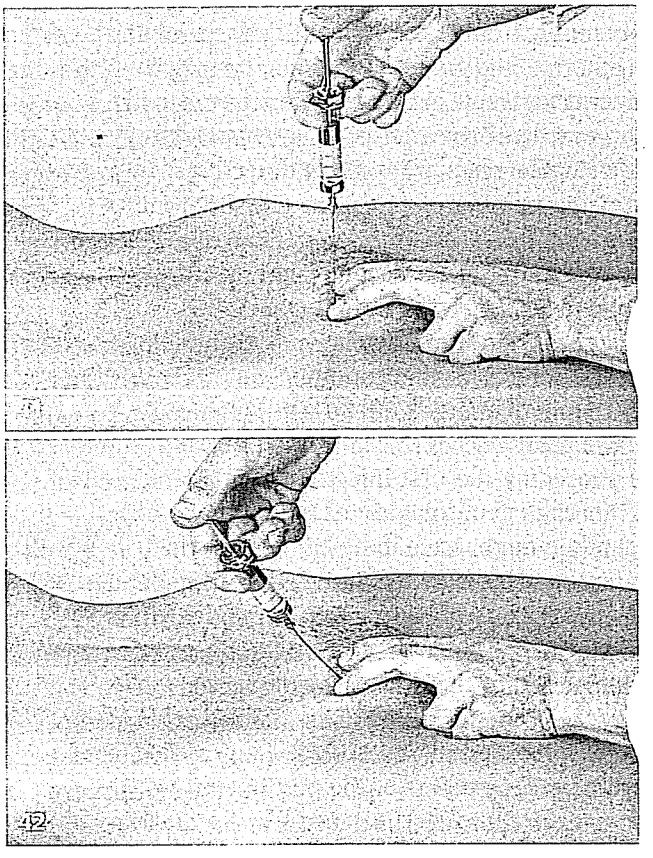


Fig. 3.40 Injection into the pelvic region.



Figs. 3.41, 3.42 Injection into the pelvic region (stages 1 [above] and 2 [below]).

the needle is inserted too far medially, the inferior superficial epigastric artery may be perforated. This may produce an extensive hematoma in the abdominal walls. We press down with the index and middle finger of the left hand until we can feel the upper edge of the pubic ramus under the fingertips. If we now insert the needle between the fingertips at right angles to the skin, we shall reach the edge of the ramus at little depth. This is the position of acupuncture point ST29 at the upper edge of the pubic bone and four fingers' breadths laterally of the symphysis, with the indications of pelvic inflammatory disease, dysmenorrhea, constipation, meteorism, and ulcer. We inject a small quantity of procaine to this point. The needle is withdrawn slightly and guided cranially past the edge of the bone, and then advanced under steady plunger pressure some 50–60 mm (depending on the adiposity of the patient) in a slightly caudomedial direction. The needle is now lying extraperitoneally close to the reflexion of the pelvic peritoneum. (See Figs. 3.**40**, 3.**41**, 3.**42**.)

From here our injection reaches the upper branches of Frankenhaeuser's plexus. If one tells the patient to breathe in and out on command, with the mouth open, one can distract her and prevent her from tensing the abdominal muscles with anxiety. There is absolutely no cause for any fear of possible complications. One should also make a habit before this injection to palpate the symphysis and, if it is found pressure-sensitive, to inject there at the same time. Sometimes this injection is made even more effective by another (transvaginal) injection to → (T) Frankenhaeuser's ganglia or by an intramural injection of the uterus. If the patient develops a marked flush following this injection into the pelvic region, one can be practically certain that an interference field that had previously reduced the peripheral blood supply has been eliminated via a Huneke phenomenon.

Periarticular injections See injections to → (T) joints.

Peridural Anesthesia*

In neural therapy according to Huneke this method is used only very rarely. It should be reserved for hospital use. However, it is mentioned here for the sake of completeness, since it will enable the practiced neural therapist to use a single injection to reach several segments bilaterally. In fact, in this injection, the anesthetic reaches several pairs of spinal nerves both above and below the injection site as they pass out through the intervertebral foramina. It also acts on the corresponding communicating branches and the ganglia of the sympathetic chain.

Alternative terminology → (T) epidural and peridural anesthesia are synonyms. Thoracic or lumbar epidural anesthesia, extradural spinal anesthesia.

Anatomy The peridural space is located in the spinal canal. The spinal canal contains primarily the spinal cord, which is covered by several membranes. The dural sheath begins at the foramen magnum. During the growth periods, the dural sheath and spinal cord do not develop to the same size as the vertebral spine. The spinal cord ends at L1 to L3, the dural sheath ends on the level of S2 to S3 (see Fig.

1.**19**). The space called peridural, extradural, or epidural space, is located between dura and the inner surface of the periosteum.

Indications Obstetrics, sciatic-root syndrome, phantom-limb pains, recent frostbite, arterial embolism, post-traumatic osteoporosis, varicose ulcer, lumbago, colic due to calculus, anuria, circulatory disturbances etc.

Contraindications Severe circulatory damage.

Materials Lumbar-puncture needle with mandrin, a 5 mL syringe filled with physiological saline solution.

Quantity 5 mL of local anesthetic (from ampoules not multiple dose vials).

Technique First thoroughly disinfect the patient's skin and allow the disinfectant to act for at least 5 minutes. The patient sits backwards astride a chair and places their arms about an assistant, leaning their head against him or her. As for a lumbar puncture, a → (T) quaddle is first set between two spinous processes in the median plane and the needle is inserted through this. We now aim for the circular space about 1 mm wide between the two dural layers of the spinal canal, which is filled in the middle with loose interstitial tissue and on the sides by a venous plexus. When the resistance offered by the interspinous ligament has been overcome, the prepared 5 mL syringe filled with physiological saline solution is attached to the needle. The needle is now carefully pushed further forward under constant plunger pressure.

In a lumbar puncture, there are two resistant zones that need to be penetrated: the ligamentum flavum and the dura, whilst in peridural anesthesia the needle must stop after overcoming the resistance of the former alone, i.e., before reaching the liquor cavity! When we have reached the tough ligamentum flavum, the resistance this offers is very considerable. To prevent the needle from going too far and into the dura after overcoming this resistance, we need to place our hand flat on the patient's back and control the shaft of the syringe in such a way that we can immediately stop the sudden jerk that occurs as soon as the needle has passed through the ligamentum flavum. (See Fig. 3.**43**.)

When this ligament has been penetrated, the needle feels as though it were in empty space. As a check, we ask the patient to cough, and aspirate after he or she has done so. If blood or liquor is drawn into the syringe (positive albumen reaction!), the needle is withdrawn and another attempt is made one vertebra higher or lower. Alternatively, the needle is withdrawn until the liquor has barely stopped dripping. On no account must the injection be given into the liquor cavity. When the needle is in the correct position, the syringe containing the anesthetic is attached and its contents of 5 mL injected slowly after a further aspiration test.

The appropriate injection sites for various regions are as follows:

- upper abdomen: between T6 and T7 or between T7 and T8;
- mid-abdomen: between T10 and T11 or between T11 and T12;
- lower abdomen: between T12 and L1;
- lower extremities: between L2 and L3;
- genitals, anus: between L4 and L4 or between L5 and SI.

After the injection, the patient should remain lying down for an hour. As a safety measure, it is advisable to check their blood pressure. Should this drop

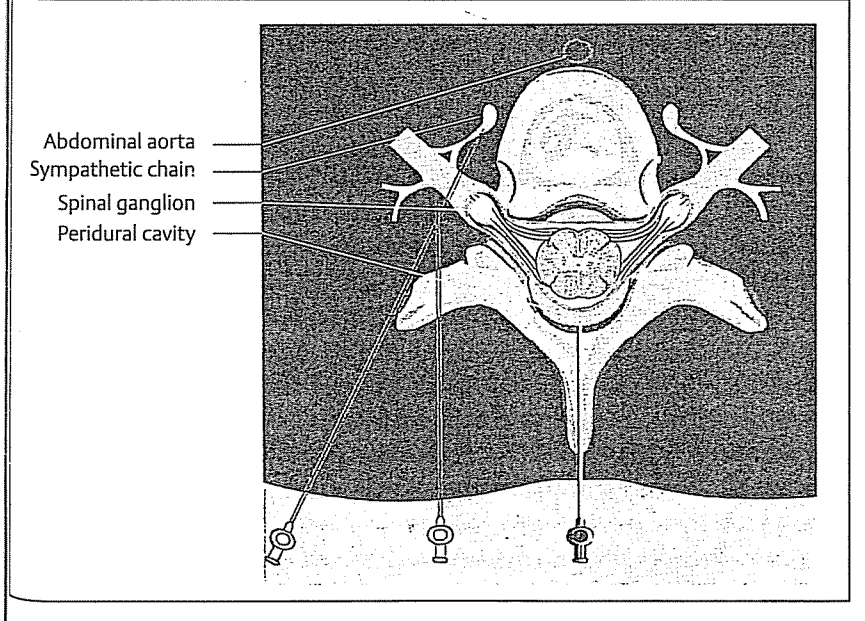


Fig. 3.**43** Injection into the peridural cavity, showing paravertebral anesthesia and the injection to the sympathetic chain.

below 90 mm Hg, vasopressor preparations must be injected.

Perirenal sympathetic-chain anesthesia See abdominal → (T) sympathetic chain (p. ■■■).

Peroneal nerve → (T) peripheral nerves (p. 325).

Pharyngeal hypophysis → (T) tonsils.

Phrenic nerve See: → (T) nerves (p. 320).

Ponndorf's Vaccination***

Ponndorf's vaccination is a non-specific irritation therapy. It has proved its worth as a complement and reinforcement of procaine therapy, which, in its effect, is oriented in a similar direction, and its more frequent use can therefore be recommended. Vaccination in the segment can further increase the effectiveness of local therapy by producing additional hyperemia and local relaxation. Such tonus-reversant treatment can cause stubborn chronic conditions to revert to a state where they will again respond to therapeutic measures if it is possible to unblock blocked control circuits and thus to return the reactive response to normal. Ponndorf's vaccination is one of the means available for this purpose. By a general reversal of tonicity, even desensitization, defensive capabilities are mobilized, which may break through an existing reactive weakness and make the organism again capable of responding to segmental treatment. However, in disorders due to interference fields, Ponndorf's vaccinations in the segment will not produce any improvement.

Indications All forms of muscular and articular rheumatism, particularly primary chronic polyarthritis; arthrosis deformans, gout, neuralgia, neuritis, and general indications for irritation therapy such as asthma, hay fever, dysmenorrhea, chronic mucous-membrane catarrh, chronic eczema and dermatitis, provided that they are not due to an interference field.

Contraindications Tuberculosis, cachexia, severe renal disease.

Materials Special vaccination fork or a normal vaccination lancet; the point of a needle or an ampoule file will also do. Koch's old tuberculin or Cutivaccine Paul Novum.

Technique We use undiluted Koch's old tuberculin or Cutivaccine Paul Novum. The latter consists of an autolysate of bacterium subtilis with the addition of a mixture of tuberculin and glycerine.

Over particularly painful joints or areas of skin or muscle, the skin in the segment is scratched quite superficially with the vaccination instrument or the point of an ampoule file, as for a smallpox vaccination, i.e., only in the epithelium and without causing any bleeding, so that the capillary blood can just be seen showing through. We make four or five scratches over the chosen area, 10–20 mm apart and about 50 mm long, and rub in one to five drops of undiluted old tuberculin or Cutivaccine Paul Novum until dry. No bandage is necessary, but if required some gauze or cellulose wadding may be placed over the vaccination site and secured with adhesive plaster. The vaccination site must not be washed for 2 or 3 days! The vaccination is repeated at intervals of 1–2 weeks, depending on the reaction produced, and of 4 weeks at a later stage, for a total of from five to 10 vaccinations. If the reaction is negative, the vaccination area may be increased when the treatment is repeated.

The symptoms of this provocation can be anything from slight itching to pain ranging from slight to severe, and may include urticaria and skin inflammation. There may be a general reaction, such as feeling unwell, headaches; more rarely, shivering and fever. But these disappear without further treatment within 24 hours (if necessary, an analgesic may be given). The more severe the reaction, the better the effect. Blisters and papule formation, which may produce superficial necroses, are extremely rare. If there is a severe reaction, first wait for the symptoms to disappear before repeating treatment, and in that event the area of skin subjected to the vaccination should not be increased but possibly even reduced somewhat. The second vaccination generally produces the strongest reaction.

The patient should be warned that this treatment may activate an existing interference field or focus. They should make a note of any scars, teeth, appendix, or other organ, which produce symptoms as a result of this provocation and report these before the next treatment session. Obviously, any interference field that announces its presence in this way must be tested and treated until it has been eliminated. If the basic disorder is exacerbated after the vaccination, even if there is no local reaction, the suspicion is justified that the cause lies in an interference field or focus. If there is no reaction, this does not prove that there is no focus or interference field. As stated in Chapter 8, Part I, Section A, Interstitial Connective Tissue and Interference Fields, regulatory paralysis may prevent the organism from responding to such provocation.

Baunscheidt's vaccination and the use of cantharides have often rendered us equally good services.

Posterior sacral foramina See posterior → (T) sacral foramina.

Preperiosteal Infiltration**

Anatomy The periosteum is a tight connective tissue membrane that covers the bone (except the joint part covered with cartilage). It is rich in nerve and blood vessels. Its inside contains osteoblasts, which are cells involved in bone formation. The neural tissue of the periosteum has many receptors that can affect the corresponding segment and the vegetative regulation through osteovisceral reflex pathways. This can be influenced through periosteum massage (Vogler, Krauss) and procaine or lidocaine injections to (not under!) the periosteum.

Materials The length of the needle depends on the depth of the intended periosteum injection, i.e., 20–60 mm long.

Quantity 1–5 mL of a local anesthetic.

Indications Pain of the periosteum can be the result of mechanical muscle overexertion and indicate a chronic inflammatory irritation. It can also indicate disturbances within the segment. Every irritation of the periosteum can produce pseudoradicular pain:

1. *Segmental therapy:* Perisostitis, periostoses, osteomyelitis, fractures, Sudeck's dystrophy, headache, ear disorders, spinal pain such as cervical, thoracic, lumbar spine syndrome, angina pectoris, intercostal neuralgias, coxalgias, and many more.
2. *Interference-field search:* Conditions following periostitis and fractures, which are not pain-free, osteomyelitis, etc.

If we find pressure-sensitive points on the periosteum during palpation, they have to be anesthetized with preperiosteal infiltrations. This way, we can interrupt pathogenic interactions between periphery and underlying organs. Periphery and organs are connected not only through blood circulation but also through neural and humoral pathways which can be used to initiate functional and reactive changes in underlying organs. This has been confirmed by experiments.

On the head, particularly the temples, the occiput, the mastoid, and the atlas transverse processes can be painful (see Fig. 1.**20**, Part I). Clavicle, sternum, and ribs have to be palpated as well. In cardiac and lung diseases, hyperalgesic points can be found mainly on the anterior thorax and lateral, in the armpits. Along the spine, such points on transverse and spinous processes can indicate visceroperiosteal disturbances. Muscle groups that are constantly tightened due to reflex action will show painful responses on their periosteal attachments. In all joint pains, not only the periosteum around the joint should be examined, but also muscles and tendon attachments that are close by. In abdominal diseases, Vogler and Krauss found indentations, roughness, deposits, and similar changes at the inferior edge of the thorax. Through periosteum massage they were able to produce objectively verifiable improvement of the diseased abdominal organs. In diseases of the hip joint, the periosteum of the trochanter major is often pressure-sensitive. The iliac crest, the sacrum, the coccyx, and the symphysis have to be palpated as well. Distal disturbances can be caused anywhere and we have to find and reduce them. Through the change of local and general sensitivity, the irritation threshold is raised and functional balance reinstated.

Technique After a → (T) quaddle is set above the pressure-sensitive point, the needle is advanced down to, not under, the periosteum. Subperiosteal injections can cause intense pain for a few days after the injection. Theoretically speaking, subperiosteal infiltration offers no advantage over preperiosteal infiltration, because the periosteum receives tropic and sensory supply from the soft tissue that is located above it. However, the pain stimulus following subperiosteal injections can produce additional responses. For example, considerable improvement of epicondylitis pain is reported after the strong response subsides (irritation therapy). In treatments of the periosteum, the therapeutic effects last considerably longer than the actual anesthesia. If the pain returns, infiltrations have to be repeated. The effect increases with every repetition. If there is no improvement, other segmental injections have to be tried or an interference field has to be located.

Preperitoneal Infiltration**

Anatomy The perietal peritoneum covers the walls of the abdominal and pelvic cavities with a serous membrane. Abdominal organs do not possess sensitive mechanosensory innervation. Pain transmission takes place via vegetative fibers of the splanchnic nerves and the celiac ganglia or other corresponding ganglia and nerves. The peritoneum receives sensory innervation from the nerves of the truncal wall. The pain-conducting nerve fibers of the organs in the peritoneal cavity run together with the sympathetic fibers of those organs. The conducted pain manifests itself in the Head's zones. The highly sensitive parietal peritoneum can show signs of intra-abdominal regulation disorders and inflammations, which we can locate through palpation and feedback from the patient. Due to positive reactions following our injections to hyperalgesic points in the abdominal wall, we can conclude that we can interrupt pathogenic feedback of visceroperitoneal and peritoneovisceral pathways through anesthesia. After proper repetition, the feedback can be regulated.

Indications We do not limit the preperitoneal injections to the → (T) epigastrium. The technique described for the epigastrium can be applied to the entire peritoneal area. Primarily in cases of non-specific abdominal pain, without specific diagnosis, well-chosen neural therapeutic injections can be therapeutically and diagnostically helpful. They do not replace common diagnostics. Most frequent are complaints in the middle and upper abdominal region, which are described as burning, drawing, sore, or dull pressure. In → gynecological disorders, the relatively common autonomic → gynecological dysfunction or pelvic congestion cause not only → backache but also non-specific abdominal pain with hyperalgesic points in the abdominal wall. Pressure sensitivity found during gynecological examination is often misinterpreted as chronic adnexitis or → adhesions, which can lead to unnecessary surgery and follow-up surgery. Instead, the true origin of the pain is rarely inflammation but autonomic dysregulation with stasis in the vascular system. Therapy of choice in this case is neural therapy.

The list of indications includes all inflammatory and autonomic dysregulation of abdominal organs, also mucous and ulcerous colitis, diverticulitis, frigidity, etc.

Contraindications All acute surgical indications, for example acute → appendicitis and conditions without sufficient differential diagnostic findings.

Materials Needles have to be chosen according to the thickness of the abdominal wall.

Quantity 2–5 mL.

Technique The patient lies supine with a pillow under their knees to relax the abdominal muscles. After careful inspection and palpation, we have the patient mark skin over the center of discomfort with their fingernail. We set a → (T) quaddle at the nail marking. Now we grab the abdominal fold above the upper pubic crest between thumbs and fingers of both hands and test thickness and pressure sensitivity by rolling the fold slowly cranially (see Fig. 3.**44**). In the case of abdominal dysregulation, this will cause pain of individual intensity, which originates in the abdominal walls and the irritation reflex of the peritoneum. We set quaddles above all palpable hyperalgesic points. We advance slowly, deeper, and search carefully in a fan-shaped area. When the patient reports acute pain in a closely circumscribed area, we have reached the correct location and deposit 1 mL.

We also search for hyperalgesic points in the dorsal Head's zones of the lumbar and sacral area. Those are treated as well. If that is not enough, we will include other injection techniques that apply to the segment, for example, into the → (T) pelvic region, → (T) paravertebral infiltration, and injection to the → (T) sympathetic chain and its → (T) ganglia. As always: search for an interference field.

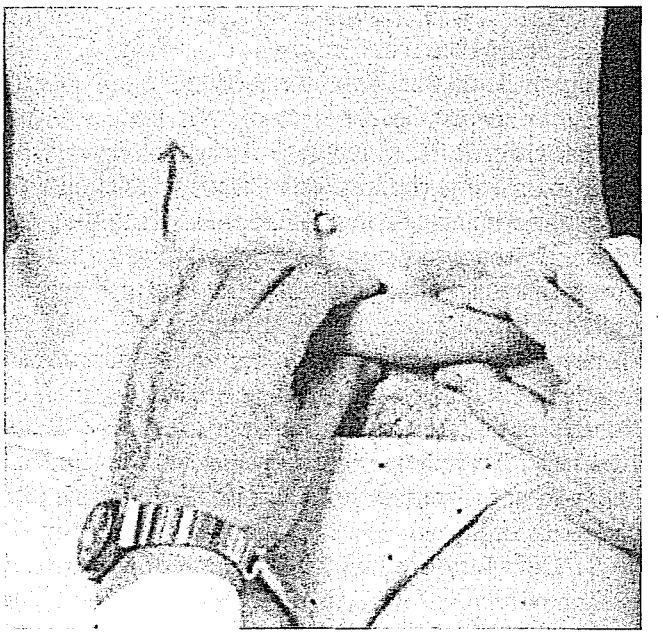


Fig. 3.**44** Rolling of the abdominal fold.

Presacral Infiltration***

Alternative terminology Parasacral anesthesia (Braun, Pendl).

Anatomy The sacral nerves S1 through S4 issue from the vertebral foramina of the sacrum and form part of the lumbosacral plexus. They also provide parts of the pudendal plexus. When we block the sacral nerves and infiltrate around the coccyx and in an anterior direction next to the anus and perineum, we anesthetize the anus, anal sphincter, rectum, perineum, urethra, and bladder. Further, in men, the penis, scrotum, and prostate are also anesthetized, whilst in women it is the vaginal introitus and vagina, the uterine cervix, the pelvic floor, the parametria, and part of the pelvic peritoneum. According to Killian, the presacral infiltration is part of the paravertebral anesthetic blocks.

Indications The indications are given by the anatomy: disorders involving the rectum, anus, perineum, bladder, and urethra; pruritus of anus and vulva, gynecological disorders, prostate, constipation due to rectal atony, sciatica, intermittent claudication, varicose ulcer, and other circulatory disturbances affecting the lower extremities, lumbago with non-specific origin.

Materials 1 mm diameter × 120–150 mm-long needle.

Quantity 2 × 5 mL. In anesthesia for surgery, quantities from 100–200 mL of 0.5 % procaine solution are used. For neural-therapeutic purposes, 5 mL to each

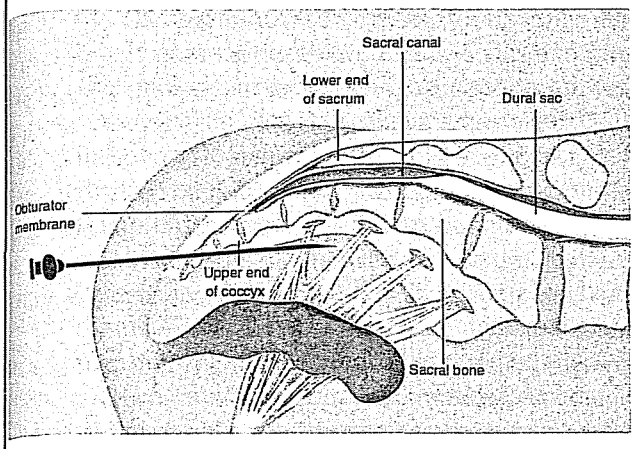


Fig. 3.45 Presacral infiltration according to Pendl (topography).

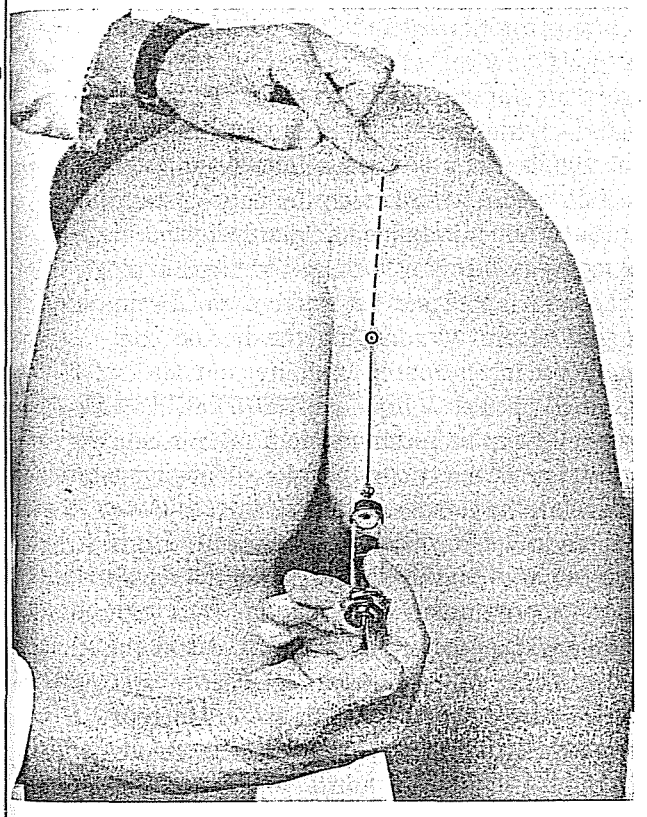


Fig. 3.46 Presacral infiltration according to Pendl.

side suffice to produce the stimulus we seek to provoke, but this amount needs to be well distributed to the individual sacral foramina.

Technique The knee-elbow position is felt by some patients to be indecent; it is not absolutely essential for this injection. It will suffice for the patient to stand hard up against a table, bend their trunk forward at right angles and place it on the table. To avoid damage to the intestines, the neural therapist with little practice in giving this injection should introduce the gloved and lubricated left forefinger into the patient's rectum in order to control the needle; with a little practice this precaution can be omitted.

The needle is inserted a finger's breadth laterally of and below the tip of the coccyx. It should be at least 120 mm long and is guided in a cranial direction on the ventral side of the sacrum. There is no risk of injury to the rectum if the needle is advanced under constant plunger pressure almost parallel to the median plane up along the anterior face of the sacrum and remains in bone contact with the sacrum. The needle is advanced and withdrawn in accordance with the curvature of the sacrum, infiltrating all the time, in order to distribute the anesthetic and let it spread evenly over the area of the sacral foramina. The uppermost of these lies about 100–120 mm from the entry site, the second about 80–90 mm distant. Before the needle is finally withdrawn, we also give a few tenths of a milliliter laterally below the coccyx, in order to include the coccygeal nerves. This injection can, of course, be administered without risk bilaterally in a single session. (See Figs. 3.**45**, 3.**46**.)

Prostate***

Anatomy In men, the pelvic plexus supplies anus, urinary bladder, and genitals through the vesical, deferential, and prostatic plexi and the cavernous nerves of the penis. Bradley showed that the prostate capsule (in women the vesical trigone at the base of the bladder) contains receptors that generate afferent sensory impulses. They regulate the Barrington reflex arch between muscles that allow the bladder to fill and empty. In order to regulate disturbances that originate at this point, injection to the prostate capsule is sufficient.

Indications

1. *Segmental therapy:* Adenoma of the prostate, acute or chronic prostatitis (prostatism), nonbacterial prostatopathy, micturition problems (such as dysuria, nocturia, pollacisuria, urge incontinence), therapy-resistant anal pruritus, proctitis; also to be tried in sexual disorders and irritable bladder, for example, after extensive transurethral resection up to the capsular area.
2. *Interference-field search:* As test injection, if the patient's history includes gonorrhea, prostatitis, epididymitis, non-specific urethritis, and the like, but especially if he has to get up several times a night to urinate or reports corresponding micturition difficulties. In geriatrics, patients often report spontaneously that after procaine treatment of the prostate they feel younger and more efficient, and that rheumatic symptoms, coronary spasms, and other secondary symptoms have disappeared following treatment.

Materials 0.8 mm diameter × 80 mm-long needle; quantity according to the size of the gland, 1–2 mL of solution per lobe.

Contraindications Carcinoma in the area of the urinary tract, tuberculoses of the genitourinary tracts, inflammatory, degenerative, and traumatic disorders of the central regulating mechanisms of the central nervous system, and diseases of psychological origin.

Technique

a. *The perineal approach:* The patient strips below the waist and is placed on a gynecological examination couch. With one hand he holds up the scrotum. The physician introduces the gloved and lubricated forefinger of the left hand into the patient's rectum. The fingertip should press the prostate slightly forward towards the needle, which is inserted through the perineum about 10 mm one side of the midline and 15 mm cranially of the anus, and is then guided under control of the physician's finger in the patient's rectum to bring it directly into the prostate (Fig. 3.**47**). Injury to the rectum must be avoided at all costs. If the needle is inserted directly above the anal sphincter (i.e., not too far cranially), perforation of the cavernous body can be avoided with certainty.

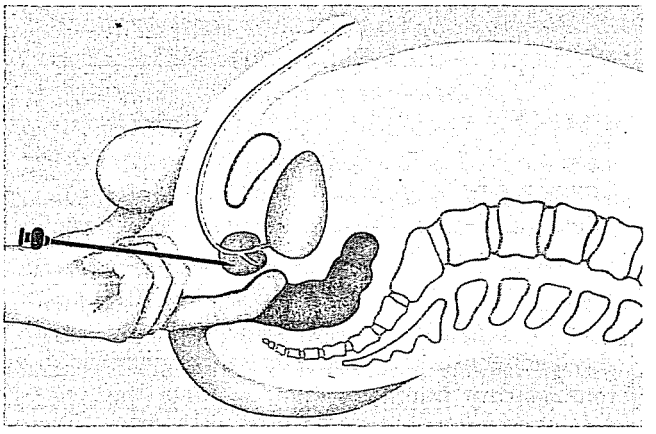


Fig. 3.**47** **Injection into the prostate.** The needle is guided from the perineum directly into the prostate, under digital control from the rectum.

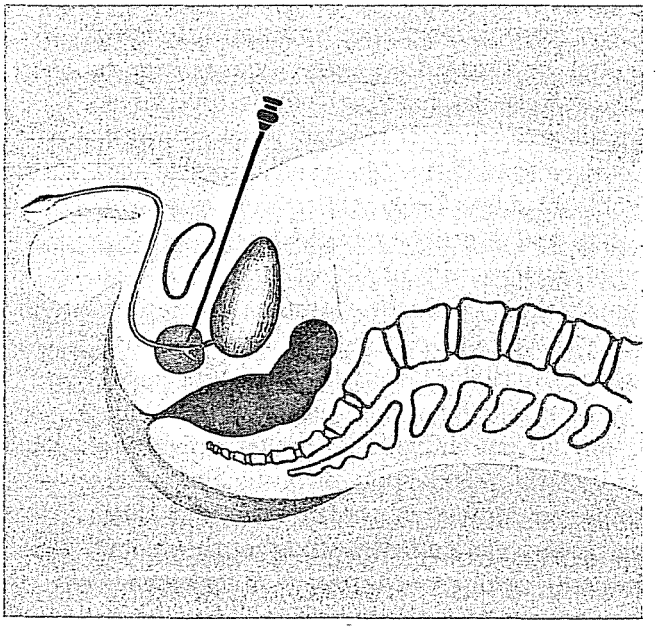


Fig.3.**48** Suprapubic injection into the prostate.

When the point of the needle is in position in the gland, 1–2 mL are infiltrated, and the same is repeated on the other side. If the gland is greatly enlarged and hard, it may offer considerable resistance to the anesthetic flowing in. If the plunger is released after the injection, it will often return to its original position. This means that practically the whole of the injected material would run out of the injection canal if the needle is withdrawn too quickly. It is therefore advisable to wait a few seconds after giving the injection before withdrawing the needle, and to distribute the injected liquid in the gland by massaging it with the forefinger in the rectum, until there is no more back pressure on the plunger. Before withdrawing the needle completely, we inject another milliliter outside the prostatic capsule. A brief prostatic massage is in any event to be recommended, since it helps to distribute the material more thoroughly throughout the gland.

Some urologists have voiced concerns about our injections into the glandular tissue. They are worried about the spreading of tumor cells. After decades of experience, we cannot confirm this concern. First, we never inject into hard glands with a bumpy surface that could be cancerous! Also, instead of 2 mm diameter Trucut needles, that can cause complications, we only use needles of 0.8 mm diameter that correspond to the fine needles used in biopsy. Inoculation metastases have been found in pancreas carcinoma with lowered immune response after biopsy with Trucut needles. Literature lists spreading of tumor cells after fine needle biopsy as "extremely rare occurrences" of 1:20 000.

The patient should be warned before this treatment that he may have a certain amount of bleeding from the urethra; this is harmless and generally requires no further treatment. At most, an oral hemostatic preparation suffices. The seminal fluid may also be bloodstained at the next ejaculation. The injection should be repeated after about a week, and once the symptoms begin to disappear the intervals may be increased. Segmental treatment of the prostate

must not be stopped too soon if the results obtained are to last.

b. *The retropubic approach:* If for anatomical reasons such as ankylosis of the hip an injection into the prostate is not possible, we inject (as in the injection into the → (T) pelvic region) to the upper edge of the pubic ramus and then deeper in a mediocaudal direction towards the prostate. When the point of the needle enters the gland, the patient reports a pain radiating to the glans penis.

If one makes use of the alternative retropubic technique by introducing the needle behind the center of the symphysis and guiding it parallel to the posterior wall of the symphysis in a caudal direction, it will reach the middle lobe of the prostate. In older patients, this often hypertrophies on its own.

The different prostate injections may also be given alternately and one then asks the patient to report on which has been the most effective in his particular case. In patients who have undergone prostatectomy, an injection into the prostatic bed will show whether this deep surgical scar is acting as an interference field.

Quaddle Therapy***

Quaddle therapy is the best-known and most practiced form of neural therapy. It is quite effective, but usually only the initial treatment followed by additional injection techniques. If the therapist is content with this option and its results only, he or she misses greater success that results from the advanced techniques. Nobody drives a car in first gear only!

The skin is the human being's largest and functionally the most versatile organ. "There is no disorder which can be cured without the skin playing its part" (Hufeland). Tracing back human development, epidermis, nervous system, and sensory organs originate in the ectoderm. This could explain why drugs acting on the nervous system have such an affect on these systems.

According to W. Scheidt, in addition to vascular and connective components, about 90% of all autonomic nerve substance is in the skin! This wealth of sensory and autonomic nerve fibers and receptors on the body's surface gives the skin a place of special importance, and we make use of this in the segmental treatment of both healthy and pathologically changed skin. Anesthesia of the skin through quaddles blocks the pain receptors that transform all excessive mechanical, thermal, and chemical stimulations into electrical signals. This way, information about pain and other morbific stimuli that travels to the posterior horn and from there to the central nervous system, can be interrupted and later reduced. Stimuli that originate in the skin can travel through cutanovisceral pathways and produce visceral pain, dyskinesia, and secretory disorders. On the other hand, warming of the skin can calm the organs of the corresponding segment and improve their blood supply. The interaction and interdependence of the internal organs and the skin are ancient empirical knowledge in medicine, and are utilized in a number of forms, such as acupuncture, skin-irritation therapy, the application of heat or cold etc. (see Fig.1.**11**, Part I).

An intracutaneous quaddle is incredibly effective as regards both the extent and depth of its action. Thus, its selective, pinpointed use forms a substantial part of our therapeutic armory. Near their terminal branches, the nerve fibrils no longer have any sheaths of connective tissue. As a result, the local anesthetic can act directly on the nerve endings and bulbs to repolarize them without first having to overcome any resistance. Quaddles are a special form of irritation therapy. They act as a stimulus that can reverse autonomic functions via segmental reflex channels in areas related to the segment. Further, by the autonomic interaction of the control circuits and systems, a response can be produced in all the related substrates and tissues. Table 1.**1** in Part I shows dermatomes that correspond to organs for quaddle therapy.

Every intracutaneous injection sets off a large number of non-specific general reactions that are quite independent of the site of the injection. So, for example, the following have been found to occur:

- a drop of about 26% in the leukocyte level after about 10 minutes;
- reduced blood pressure;
- increased acid excretion in the urine;
- increased capillary permeability in the vicinity of a quaddle, with an escape of colloidal blood particles that do not normally reach the skin and that produce a substantial effect on important humoral regulating complexes.

Apart from this general effect, there is the specific action that is produced by selective, pinpointed injections to particularly effective points and in disturbed segmental tissue. The injection of a local anesthetic to these points can further increase the effect. Naturally, we can only give suggestions but no generally valid points or zones for every "diagnosis." The analgesic points that require treatment have to be located individually through extensive exploration and palpation of the indicated area and its surroundings. The general points listed in the text have to always be complimented by the individual points of the patient.

Overview

The techniques listed below will be covered in the following pages:

1. scalp p. 338;
2. mastoid process, p. 338;
3. parasternal quaddles, p. 339;
4. bilateral quaddles to the thoracic spine, p. 339;
5. quaddles over the epigastrium, p. 339;
6. quaddles in the pelvic region, p. 339;
7. quaddles in the sacral region, p. 339;
8. quaddles over diseased joints, p. 339;
9. quaddles on thigh and leg, p. 340;
10. quaddles in diseased skin, p. 340.

Refer also to the figures dealing with Head's zones (Figs. 1.**16**, 1.**17**).

Alternative terminology Intradermal or intracutaneous anesthesia.

Materials About a size 20 needle (special quaddle needles are not necessary).

Quantity 0.2–0.4 mL per quaddle.

Technique A quaddle should be strictly intracutaneous (see Fig. 3.**49**). In this form it is far more effective than a subcutaneous injection. The fine needle is inserted flat, almost parallel to the skin, until its opening, which should always face up, just disappears below the epidermis. When the plunger is pressed, a pale, circumscribed swelling like an insect bite will form, whose surface is reminiscent of orange skin. This swelling is termed "quaddle."

The effectiveness of a quaddle may be further increased by injecting air. The syringe is not completely filled with procaine and is held with the point up. If the plunger is then withdrawn as far as it will go, air will be drawn in. The syringe is held with the point up as the needle enters the skin. As pressure is applied to the plunger, this air must escape first. It will separate the skin and inflate it suddenly over an area up to 30 mm in diameter. As the procaine flows out, it can spread more easily and over a larger area. Such combined emphysema-procaine quaddles are used with particularly good effect for heart and lung conditions, when they are given parasternally and/or bilaterally next to the spine, in the vicinity of varicose ulcers and for injections to Head's zones.

If a procaine quaddle is set within an area of cyanosed skin, for example, in the vicinity of an earlier varicose ulcer, where the over-saturation of the blood with carbonic acid as a result of venous congestion is clearly visible, a bright red zone about 10 mm in diameter will quickly appear. After a procaine-and-air quaddle, the diameter of this zone will be at least 30 mm.

There is no doubt that the quaddle has a deep-acting effect that is adequate in a large number of cases. We can see this, for example, in cases of lumbago, where the patient will happily report an improvement of about 80 % after a few correctly sited quaddles. To make absolutely certain, it is common practice amongst neural therapists to pass through the quaddle and inject directly into the hyperalgetic tissue at the required depth.

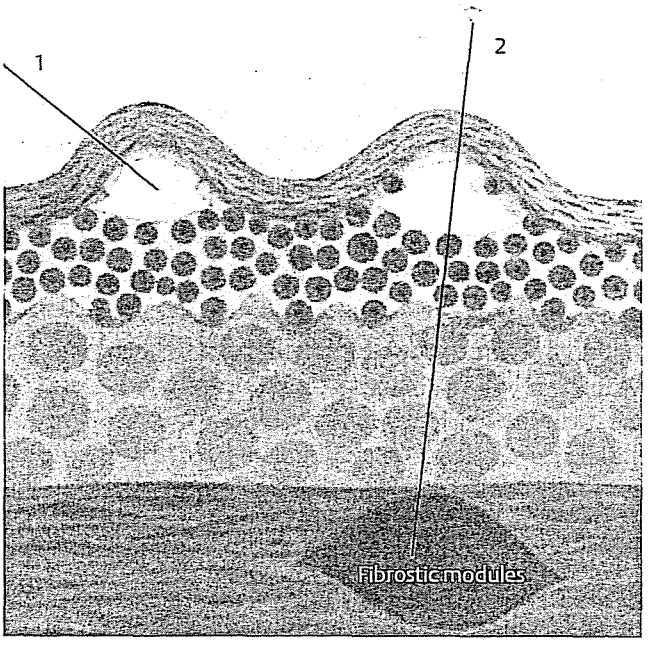


Fig. 3.**49**
1. Intracutaneous quaddle
2. Injection through a quaddle into a fibrositic nodule

Before injection, whatever the symptoms or disorder, in addition to quaddling the well-known and frequently recurring "regulation zones" it is always necessary to find the patient's "personal" hyperalgetic zones and points relevant to each particular case, and to quaddle these also. The success or failure of any quaddle therapy depends decisively on the correct siting of the quaddles and thus on the prior examination of the patient. Any bleeding that occurs is stilled by pressure with a cottonwool swab.

1. Scalp

At the level of the parietal bone or in the temporal area, intra- and subcutaneously down to the periosteum below, always in conjunction with an → (T) intravenous procaine injection, for: alopecia, headaches, insomnia, dizziness, cerebral contusion or concussion and its sequelae, traumatic epilepsy (plus all head scars down to the periosteum!), for presclerotic or spastic cerebral circulatory disturbances, paralysis agitans (Parkinson disease), pre-and post-apoplectic conditions, diabetes insipidus (see Figs. 3.**54**–3.**56**).

2. Mastoid Process

Over the mastoid process in conjunction with injections down to the periosteum and an → (T) intravenous injection, for disorders of the ear, such as acute or chronic otitis media (but not if there is a cholesteatoma or severe damage to the middle ear, which must be treated by a specialist), mastoiditis, deafness of the inner ear, vestibular loss of equilibrium (see Fig. 3.**22**).

3. Parasternal Quaddles

One quaddle to each side of the upper sternum, and a third over the angle formed by the xiphoid process with the left lowest rib. Women frequently also report a hyperalgetic point under the attachment of the left breast, and an additional quaddle should also be set here. If necessary, one may go through this quaddle to the inferior edge of the rib to the periosteum, the intercostal nerves or as far as the pleura. In esophagus disorders, bilateral quaddles to the edge of the sternum, above the intercostal spaces, in addition, bilaterally to the corresponding area of the thoracic spine (T5 to T8); also injections into the epigastrium. In cardiac patients, we give an additional → (T) intravenous injection on the left side, in lung patients alternately left and right, and also, in both these cases, the quaddles described in (4) below next to the spine (see Fig. 2.**7**, Part II and Table 1.**1**, Part I).

4. Bilateral Quaddles to the Thoracic Spine

In addition to the parasternal quaddles described in (3) above and the → (T) intravenous injection, we set five or six quaddles on each side over the shoulder and two to three fingers' breadths from the interspinal line, for lung disorders such as asthma, silicosis, whooping cough; sequelae of bronchitis, pneumonia, pleurisy, pulmonary tuberculosis. This tests the "thoracic area" for a potential interference field (see Fig. 2.**8**, Part II).

5. Quaddles over the Epigastrium

The injection is administered with the patient lying on their back. We set a quaddle over the celiac ganglion, three fingers' breadths below the xiphoid process. We then pass through this quaddle and go deeper to the peritoneum of the → (T) epigastrium. Here again, we set additional quaddles over hyperalgetic points found by palpation, e.g., over the gallbladder, the edge of the liver, the pylorus, Vogler's points on the inferior edge of the thorax, and in the corresponding Head's zones on the shoulders and between the shoulder blades. If this treatment in the upper abdominal region does not suffice, we combine it with an injection to the abdominal → (T) sympathetic chain (see Fig. 3.**10**).

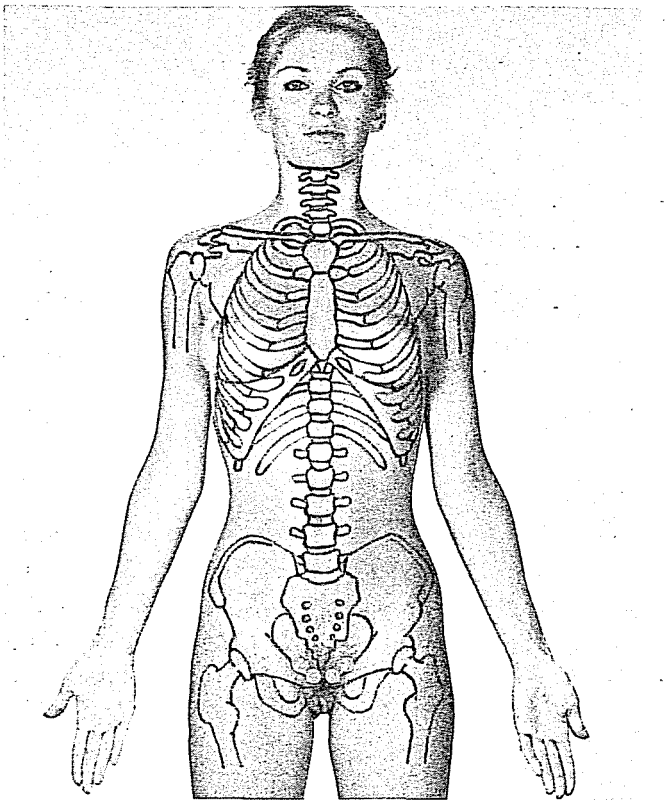


Fig. 3.**50** Quaddles to the pelvic region.

6. Quaddles in the Pelvic Region

We distribute about four quaddles over the ventral Head's zones of the pelvic region, i.e., over the area of the bladder and the mons pubis, for gynecological disorders such as vaginal discharge, dysmenorrhea, endo- and parametritis, pelvic inflammatory disease, meno- and metrorrhagia, sterility, lack of libido, and disorders affecting the urogenital tract, e.g., inflammatory, functional, and dystrophic symptoms of the bladder, prostate, and renal pelvis.

Generally, we also set the quaddles over the sacrum as described in (7) below, possibly in conjunction with injections into the → (T) pelvic region or to → (T) Frankenhaeuser's ganglia. (See Fig. 3.**50**.)

7. Quaddles in the Sacral Region

Over the sacrum we set six quaddles in the dorsal lower abdominal Head's zones. The highest pair of these lie over the lateral dimples of Michaelis's rhomboid, the lowest directly next to the upper limit of the natal cleft, about 20 mm apart. The four upper quaddles cover the area innervated by the hypogastric plexus; the lower pair act on the outer anal and vaginal zone S4 to S5 (see Fig. 3.**51**).

8. Quaddles over Diseased Joints

Over diseased joints, especially the shoulders, elbows, knees, and ankles, we set a series of quaddles for arthrosis, arthritis, bursitis, tendovaginitis, sports, and

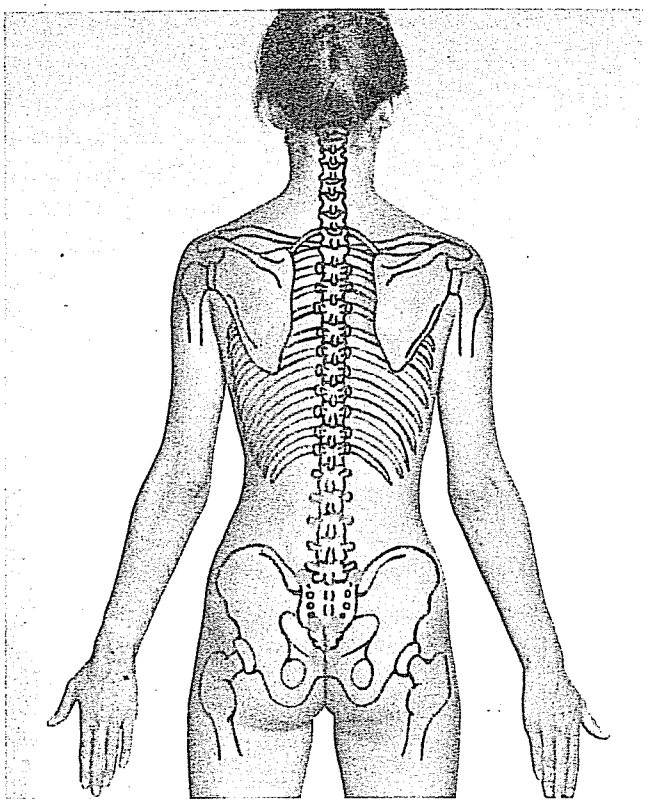


Fig. 3.**51** Quaddles to the sacral region.

other injuries with hematoma, sprains, torn ligaments, and fractures. Infiltrations may also be given fanwise through the quaddles into the painful zones and in depth to the main hyperalgetic points.

In the case of the knee, 2–3 mL of procaine are distributed in five or six quaddles all round the joint, as follows:

- on the outside, one over the joint line;
- on the inside, one each over the head of the tibia, over the joint line, and over the head of the femur, these three forming a triangle (Fig. 3.**52**) in the center of the popliteal fossa (acupuncture point for skin disease, paresis of the lower extremities, arthrosis of the knee and sciatica).

If no satisfactory result is obtained, it is possible to pass through the last of these quaddles to infiltrate at depth to the blood vessels, the nerves, and to and into the joint capsule, in order to increase the effectiveness of the ring of quaddles. If other painful points are found in the course of palpating the affected joint, these will obviously deserve priority treatment.

The extensive effects of quaddles can be demonstrated convincingly by the following test. If a patient who has had a stroke is given a few quaddles on the extensor side of the finger joints of his or her spastically contracted hand, the spasm is relaxed immediately and the fingers stretch during the injection.

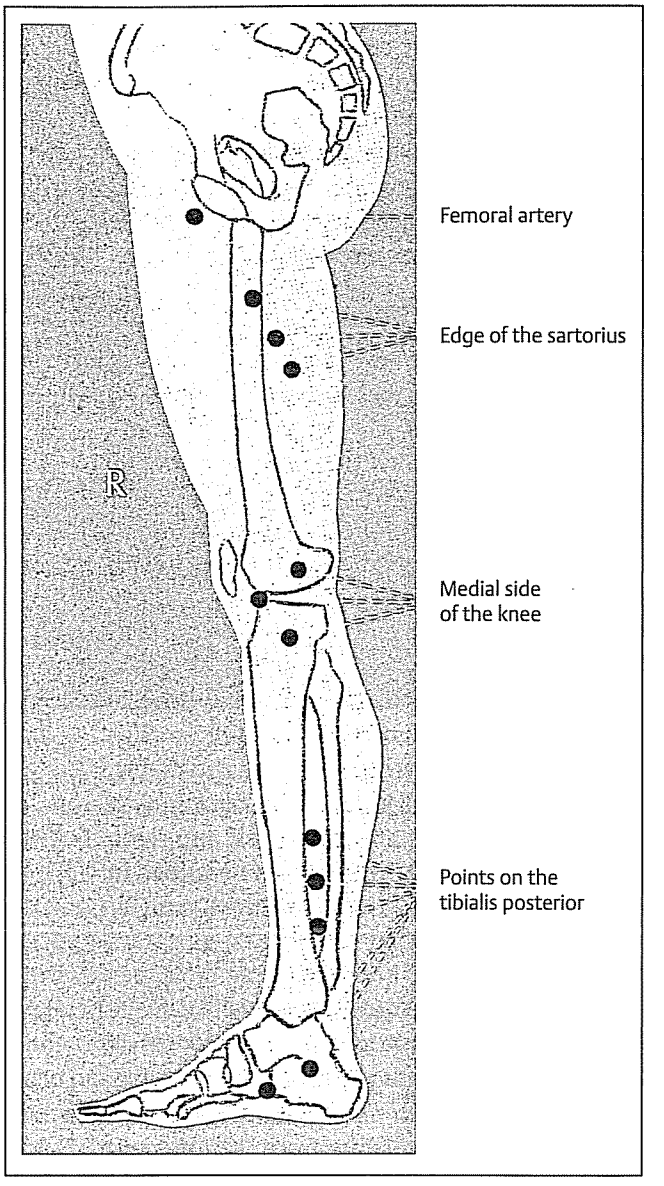


Fig. 3.**52** Injection sites to the lower extremities.

9. Quaddles on the Thigh and Leg

From acupuncture we have learned to use a number of injection points in thigh and leg. We quaddle the inside of the thigh about the middle of the dorsal edge of the sartorius, and the inside of the leg over the posterior tibial artery and the medial malleolus. This treatment has proved helpful for abdominal and pelvic disorders, especially if they are accompanied by circulatory disturbances and signs of congestion in the legs; also for disorders affecting the hip and knee joints. In the thigh, we pass through the quaddles to give → (T) intramuscular infiltrations at a depth of 40–80 mm. In the leg, we try to reach as far as and into the posterior → (T) tibial artery (see Fig. 3.**52**).

10. Quaddles in Diseased Skin.

For skin disorders such as localized eczema, psoriasis, shingles, local pruritus, scleroderma, etc., we set quad-

dles in the affected areas of skin. In these cases, subcutaneous infiltration is also indicated. Rheumatic conditions can often be cured permanently by one or several quaddles over the painful area, although no pharmacological explanation can be found for this effect. The same also applies to itching, weeping eczemas, etc. In cases of insect stings and snakebite, the sting or bite should be thoroughly infiltrated around and under the site of the lesion as soon as possible, in order to prevent toxic reactions.

Retrobulbar injection See → (T) ciliary ganglion (p. 367).

Sacral anesthesia See: → (T) epidural anesthesia (p. 298).

Sacral Foramina (Posterior)*

Alternative terminology Trans-sacral infiltration, sacral-plexus block.

Anatomy See epidural anesthesia.

Indications Sciatica, sciatica-like pain in carcinoma of the prostate and anorectal metastases, prostate and rectal disturbances, unilateral backache, circulatory dysfunctions of the lower extremities; sphincter spasm of the bladder, coccygodynia.

Materials 60 mm needle.

Quantity 2–5 mL.

Technique The patient may either stand or lie face down. The line connecting the two iliac crests intersects the spinous process of the fourth lumbar vertebra. Another two spinous processes further caudally, we find that of the first sacral vertebra. The foramen lies two fingers' breadths laterally from its lower edge. The needle is guided about 10 mm deep into the foramen. Following a negative aspiration test (liquor!), the procaine is infiltrated. The injection into the other foramina is given analogously.

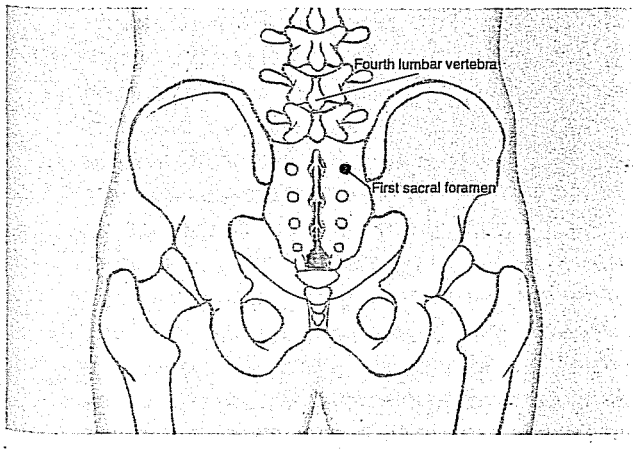


Fig. 3.53 Injection to the first posterior sacral foramen.

This conduction anesthesia of the sacral nerves through the second and third foramina blocks most of the area supplied by these in the sacral and coccygeal plexuses. (See Fig. 3.**53**.)

Scalp***

Indications Headache, vertigo, insomnia, post-concussion syndrome, traumatic epilepsy, cerebral arteriosclerosis, central vasospastic disturbances, diabetes insipidus, paralysis agitans (Parkinson disease), pre- and post-apoplectic states.

Materials About a size 20 needle.

Quantity 0.5 ml to each side.

Technique For the injections to temples and parietal bone (10 mm superior to the center of the zygomatic arch [TB-22 = GB-3] or four fingers' breadth superior to the center of the zygomatic arch, but one fingers' breadth dorsally [ST-1]), one may first set → (T) quaddles bilaterally and then pass the needle through these, or simply insert the needle briskly and let it go down as far as (or into) the periosteum. The more briskly this is done, the less painful it is. If the patient reports other particularly painful points or areas on the skull, then these are proper sites for injection. No blueprint is possible and one should strictly avoid proceeding by rote. It is advisable to palpate the scalp thoroughly before injection and give special attention to any pressure-sensitive points. Amongst these the exit points of the → (T) supraorbital nerve above the eye and of the occipital nerve at the back of the head recur particularly frequently, and are especially important for our treatment.

In acupuncture, for regulating the blood supply to the skull, the needles are set a fingers' breadth above the center of the cheekbone. From this point it is also possible to suppress menstruation, and injection here during the first 3 days of a period should be avoided or the patient informed beforehand of the effect to be expected.

Reference should also be made here to the hyperalgetic points in the atlas. These are found just in front of and below the mastoid process. Practitioners of manipulative therapy inject about 1.0 mL of procaine to the atlantal processes if their treatment has not succeeded in relieving pain in the atlas.

We always combine the injection under the scalp with an → (T) intravenous procaine injection. (See Figs. 3.**54**, 3.**55**, 3.**56**.)

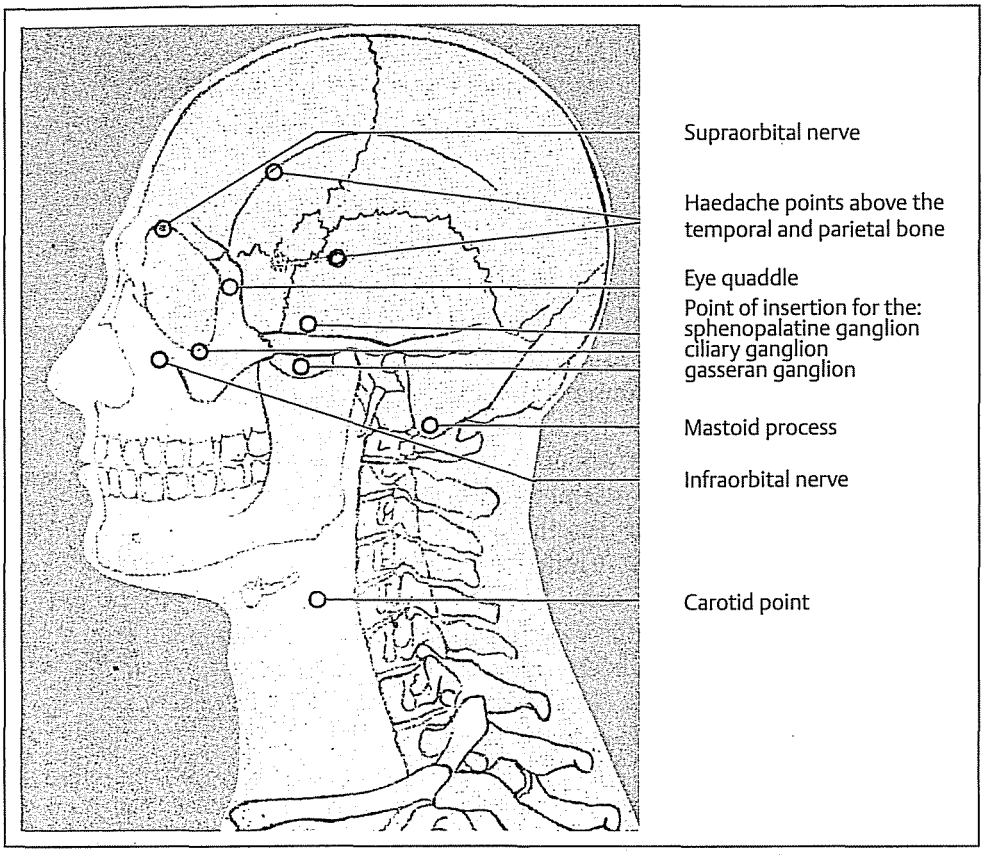


Fig. 3.54 Injection points on the head, lateral aspect.

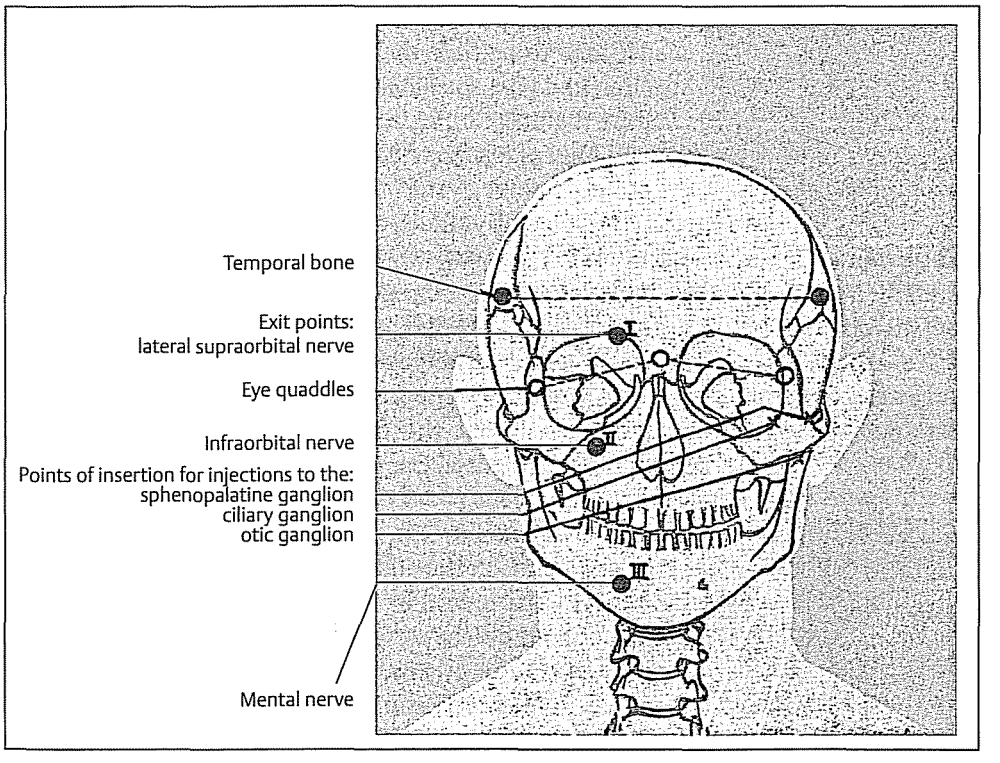


Fig. 3.55 Injection points on the head, anterior aspect.

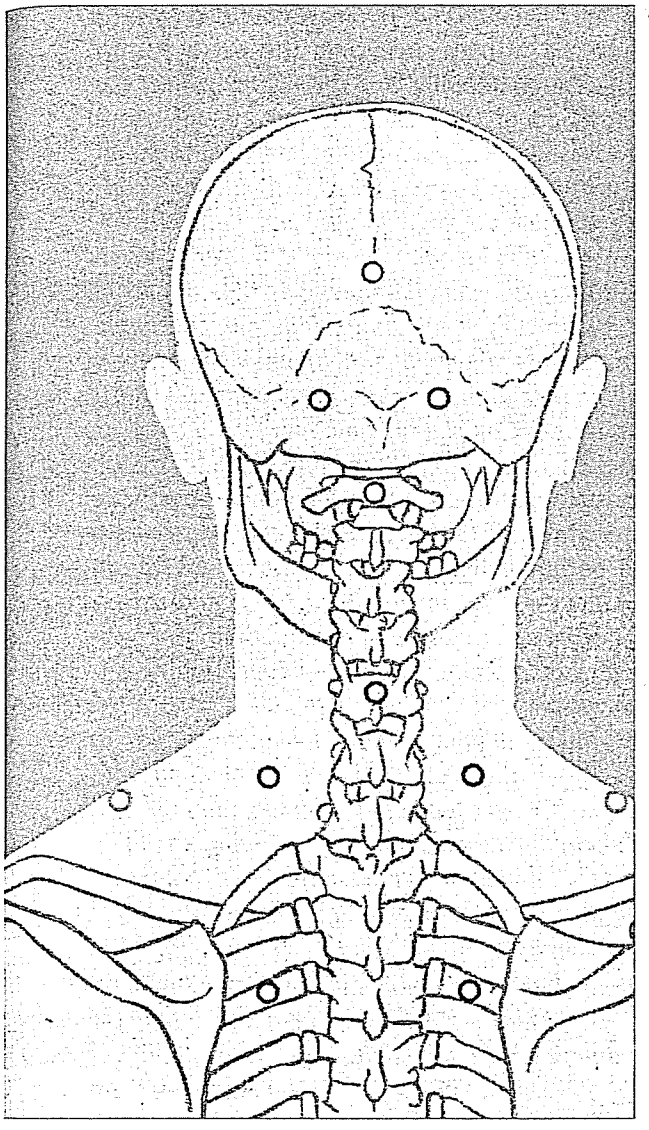


Fig. 3.56 Frequently used points on the back of the head, neck, and shoulders.

Scars***

Indications:

1. *Segmental therapy:* All scars in the segment must be injected at the same time! In addition, any symptoms involving scars (itching, rash, inflammation etc.), keloids, post-operative symptoms.
2. *Interference-field search:* Any scar, of whatever kind and size, no matter how old it is and whether it has healed primarily or secondarily, often proves to be acting as an interference field for chronic disorders at remote sites. In cases of bronchial asthma, eczema, and other diseases that can appear during the first months or first year of an infant's life, the first scar of every human being, the umbilicus, may be an interference field. This is particularly the case, if the health history lists omphalitis or draining umbilicus for the mother or slow healing of the umbilicus. In Chinese acupuncture, the view is held that a scar forms an obstacle to the vital force flowing through the body, and that this can be eliminated by the insertion of needles.
3. *Prophylaxis:* Anesthesia of surgical and injury scars, repeated twice or three times as soon as the wound has healed, is the best prophylaxis against their becoming painful and against the formation of keloids and interference fields.

Materials Short needle.

Quantity As required; for hard scars (especially on hands or feet), use a cartridge or locking syringe if possible. To keep the quantity of the neural-therapeutic product as small as possible, it is advisable to inject air into the scar beforehand.

Technique The testing and injection of scars does not present any technical difficulties. Procaine is injected quite superficially into the scar so that something like a confluent weal (→ (T) quaddles) is formed. In the case of a long, narrow surgical scar, we set a line of quaddles about 10–20 mm apart. Sometimes the preparation will run along inside the scar of its own accord, separating the tissue layers along its length so that only very few separate injections will be needed. The two ends of any scar should always be located and treated with terminal → (T) quaddles.

Extensive areas of scarring, e.g., resulting from burns, are preferably separated from the underlying tissue by first injecting air. This not only saves on the amount of procaine required, but also makes it easier afterwards to distribute the injected preparation more evenly over the area of the scar. This can be further helped by making circular massaging movements to distribute the procaine into the parchment-like crepitant skin emphysema. In the case of deeply indrawn scars, it is essential always to inject in depth. In the case of post-operative abdominal scars we go down as far as the peritoneum at one to three points. If the bone is also involved, the injection should include the periosteum; in nerve lesions and following neural surgery, we probe gingerly under continual infiltration for the nerve itself. Paresthesia will disappear following such treatment, and often the nerve function regenerates surprisingly well. There is, however, one exception to the rule: with deeply indrawn scars behind the ear after total mastoidectomy, avoid injecting directly into the crater or, if so, inject only very superficially! Because of the proximity of the meninges, too brusque an approach may produce vomiting and dizziness. In such cases it suffices to infiltrate around the scar in the surrounding area of healthy tissue and to inject to the adjacent periosteum.

The term "scar" should be interpreted in the widest possible sense; so, for example, Dupuytren's con-

tracture is a scar. Every fracture heals with a bone scar, every extracted tooth, every enucleated eye leaves a scar that is capable of making the body sick. We must also search for any infiltrate left behind following the injection of tissue-irritant preparations. Even the scars left by corns, neck boils, toe surgery, or a perineal tear should not be left out of account.

In newborns and infants, the umbilical scar can create an interference field, including conditions such as umbilical spasms, colics, dyspepsia, diarrhea, pylorospasm, enuresis, eczema, bronchospasm, chronic rhinitis, restlessness, etc. We place a large → quaddle above the umbilicus and infiltrate 2 mL 10–20 mm deeper and slightly lateral, between the layers of the rectus abdominus muscle. In adults, this can be done with 2–5 mL of 1 % procaine or lidocaine solution, particularly, if a test injection into the umbilicus is described as extremely painful.

Someone who is particularly thorough with regard to scars is certain to have a high success rate. Only if the whole of the scar is treated with the local anesthetic and air near the surface, and in a few places also at depth, and only if no part of it is left out, can a successful outcome be expected or the scar be safely eliminated as a relevant factor. It is even better to eliminate scars as potential candidates by injecting only the points found to produce a reaction, after measuring their electrical resistance or making an electrical skin test. Such reactive points generally lie at the two ends of surgical scars and especially on the edge of the scar. Kellner's histological research indicates that anesthesia of a partially healed scar initiates a new granulocytic phase, which can lead to complete healing unless antigens or denatured body substances prevent the process.

Talcum powder used on surgical gloves can form a foreign-body granuloma in a scar. These silicate crystals, and granulomas caused by suture thread, can occasionally produce such persistent interference that not even a series of neural-therapeutic injections will be adequate to desensitize the area completely. In such cases only scar excision can help. Although talcum is hardly ever used nowadays with surgical gloves, we should not forget that these crystals can still be present in old scars and can act as an interference field. See page 102 for a description of the electrical testing of scars.

Sciatic Nerve and its Branches***

Anatomy The sciatic nerve receives its fibers from all the roots of the sacral plexus from L4 to S3. These roots combine in front of the greater sciatic foramen into a 35 mm-wide nerve plate. This lies extended on a bony base, so that it cannot move out of the way of our needle. This is of great importance to us, since we want to penetrate the nerve sheath and inject endoneurally. For the injection into the neighborhood of this nerve (perineural injection) we always need substantially greater quantities of procaine. But the sciatic nerve, with its tough connective tissue covering, places exceptional resistance in the way of any anesthetic solution given perineurally. Lidocaine contained in Xyloneural is about 10 times better able to penetrate the nerve sheath than procaine (Doenicke). Thus, if Xyloneural is used on any of the larger nerves, a perineural injection is adequate. In view of the small quantities we use, there is no cause to fear damage to the nerve as a result of administering a local anesthetic by direct intraneural injection. If there were, there would be no such thing as conduction anesthesia (nerve blocks). See Table 3.**5** for a guide to diagnosing the level of the lesion in patients with intervertebral-disk sciatica and post-sciatic circulatory disturbances.

The sciatic nerve provides the motor nerves to practically all the flexor muscles in the thigh and leg and to all the extensors in the leg and foot, and the sensory nerves to the skin of the leg and foot. Exception is a medial area from the knee to the medial edge of the foot, which is supplied by the → (T) femoral nerve.

Indications Sciatica, damage to the intervertebral disks in the lumbar region; pain, circulatory disturbances and paresthesia in the lower extremities, paralysis following injection, and post-operative pressure paralysis.

Neuralgia is always best attacked at the nerve root. This applies especially to the sciatic nerve, because it divides very high up. Neuralgia of the sciatic nerve starts in the region of the sacrum and initially often seems to be nothing more than lumbago. Later, the pain radiates to the leg. If the symptoms are exacerbated by straining, coughing, or sneezing, this suggests a prolapsed intervertebral disk. Bilateral sciatica always suggests a tumor in the true pelvis or disease of the lower vertebrae (metastases!).

In the case of long-standing sciatica, when the pain in the region of the nerve root or the thigh is resolving, the patient often reports an unpleasant burning pain in the calf and finally under the lateral ankle bone. Our point of attack will therefore have to be guided by these circumstances.

Technique In cases of sciatic disorders, the Huneke brothers injected to the sacral plexus only. This approach produced satisfying results. Later, Reischauer recommended injections more cranially to the sciatic nerve root. Also, see under → sciatica in Part II.

Overview

The list below gives an outline of the sections to follow:

1. root of the sciatic nerve, p. 346;
2. → (T) epidural anesthesia, p. 348;
3. → (T) presacral infiltration, p. 348 (the advantage of this injection and of that to the lumbar → (T) sympathetic chain by comparison with injections to the sciatic nerve further down resides in the fact that the former also reach the pre-ganglionic fibers and ganglia);
4. sacral plexus, p. 348;
5. posterior → (T) sacral foramen and sacroiliac joint, p. 349;
6. gluteal region, p. 349;
7. branches of the sciatic nerve, p. 350.

Table 3.5 Guide to diagnosing the level of the lesion in patients with intervertebral-disk sciatica and post-sciatic circulatory disturbances, according to Hopfer

	L4	L5	S1	Post-sciatic Circulatory Disturbances
Radiating pain to leg	+	+	+	+
Pain when sneezing or coughing	+	+	+	0
Mobility of vertebral column	Good	Poor	Poor	Good
Lying down	Poor	Poor	Poor	Poor
Sitting	Good	Poor	Poor	Good
Walking	Good	Good	Good	Very poor
Dysbasia	0	0	0	+ + +
Nocturnal calf pains	0	0	+	0
Bending forward	Good	Poor	Poor	Good
Walking on tiptoe	Good	Good	Poor	Good
Walking on heels	Good	Poor	Good	Good
Subjective band of pain (more indicative than the objective hyperesthetic strip)	Small of back/ groin/flexor aspect of thigh/knee	Small of back/ "general's stripe"/ big toe	Small of back/ leg dorsally/heel	Flexor side and laterally in thigh and leg
"Hypo strip" (spinal sensory Loss)	L4 segment	L5 segment	S1 segment	L4/L5
Temperature difference (autonomic Loss)	0 (possibly)	0	0	Objective, often subjective: 75 %
Hip joint (rolling leg movement)	NAD	NAD	NAD	NAD
Patellar reflex	Loss or reduced	NAD	NAD	NAD
Achilles-tendon reflex	NAD	NAD	Loss	NAD
Lasegue-Bragard	0	+	+	0
Extensor paresis of big toe (motor loss)	0	+	0	0
Numb heel	0	+	+	0
Spinous processes sensitive to tapping	Three finger breadths above iliac-crest level	L5	Three finger breadths below iliac-crest level	0
Possible exceptions			Simulation due to post-sciatic circulatory disturbance, hence possibly damage to L5	
Treatment	2/3 L4, 1/3 L3 (on account of post-sciatic circulatory disturbance), x-ray control	L5 and some to L3	S1	L3

1. Injection into the Region of the Root of the Sciatic Nerve L4/L5 and S1***

Materials 1 mm diameter × 80 mm-long needle.

Quantity Between 5–10 mL preferably from ampoules, because the preservative added in multiple dose vials may cause local irritation in paravertebral root anesthesia and cerebral irritation in inadvertent injections into the liquor (for example, root diverticuli).

Level diagnosis and technique In the sciatic syndrome a major part is played by mechanical compression of the roots in the lumbosacral region, especially at L5 and S1. This must be treated first after identifying the level involved, until the acute stage has passed. The injections described under (4), (6) and (7) below are intended for treating the residual condition after the acute symptoms have disappeared, but they can also be used for purely neurogenic neuritis (lack of vitamin B, diabetes, toxemia etc.) and pseudoradicular syndromes (→ sciatica), but the latter are secondary with regard to the number of cases presenting for treatment. Before undertaking treatment, tumors, arthritis of the hip, and rheumatoid spondylitis must first be excluded.

Apart from the patient's history (interference field?), examination (typical posture), and palpation, the correct level for the injection is indicated above all by the spinous process that shows maximum sensitivity on percussion. But the band of pain indicated by the patient is also a useful pointer. The patient's details should be checked against the guide for identifying the level of the lesion given in Table 3.**5**. The x-ray picture can provide some light on pathological processes, but should not be overrated as a diagnostic tool.

Before injection we orient ourselves by the line of spinous processes and the line of the iliac crest. These intersect over the spinous process of the fourth lumbar vertebra. The intervertebral disk L4/L5 and the root of L5 lie directly below this point. The injection must be given to the site of compression. This is where the prolapsed intervertebral disk is pressing on the root where it issues from the dura mater, but the exit point of the nerve from the vertebral foramen is one level higher!

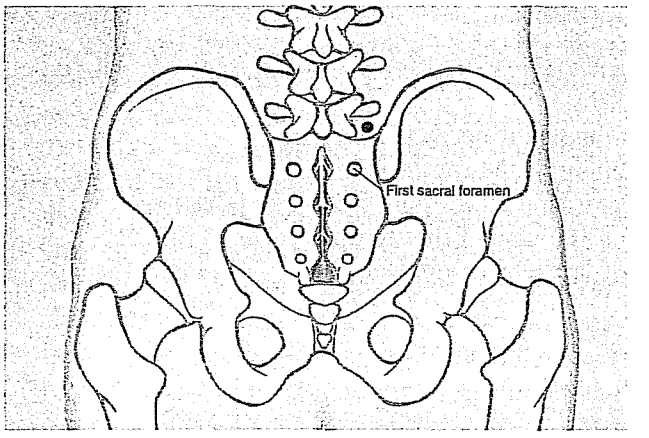


Fig. 3.**57** Injection into the region of the root of the sciatic nerve; entry point to the canal between pelvis and fifth lumbar vertebra.

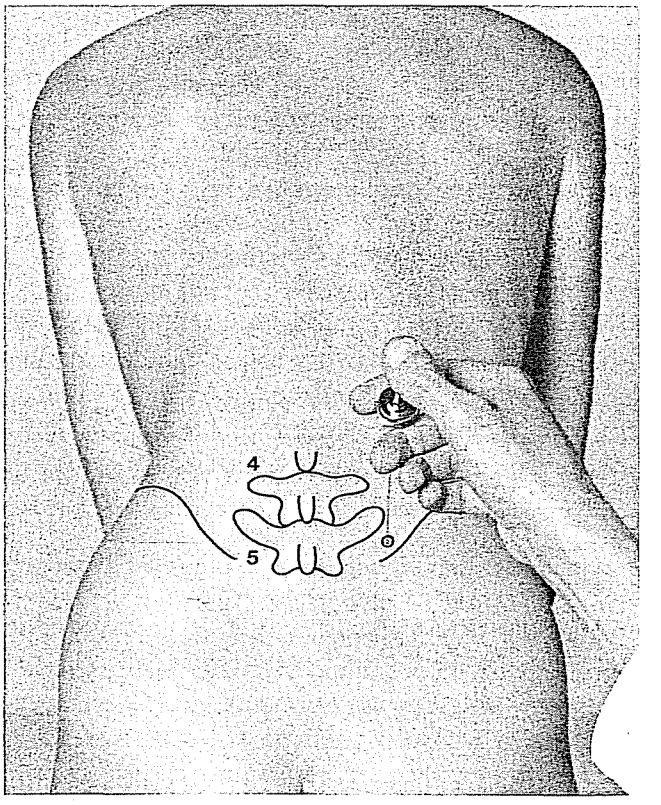


Fig. 3.**58** Injection into the region of the root of the sciatic nerve L3/L5

L4 Root

Protrusion or prolapse of this disk is relatively rare. According to Reischauer, it occurs in only 5 % of all sciaticas. The subjective band of pain runs from the anterior aspect of the thigh to the edge of the tibia. If the head of the patient with L4 syndrome is bent forward in a swift motion, while they are lying on their back, they will report lumbar pain caused by nerve stretch. The technique is similar to that used for L5, but the entry site for L4 is two finger breadths above the line of the iliac crest. (See Figs. 3.**57**, 3.**58**.)

L5 Root

The compression of this root causes 80 % of all lumbar sciatica due to intervertebral disks. It produces pain on the lateral aspect of the thigh ("general's stripe") and leg down to the dorsum of the foot and the big toe. The patient complains of compression pain on coughing or sneezing, the Lasegue sign is positive. Maximum percussion sensitivity directly above the line of the iliac crest.

Technique The 80 mm-long needle is inserted 10 mm above the line of the iliac crest and 40–50 mm later-

ally of the line of spinous processes. First proceed in a sagittal direction perpendicular to the skin surface and then converging 15 ° to the median plane, until the patient reacts with an electric pain in the L5 ligament when the needle reaches a depth of 50–70 mm. After negative aspiration inject 5–10 mL at this point. If there is severe pain after 1–2 mL, it indicates that the needle has entered the extradural sheath of the nerve root. In that event, the needle should be withdrawn 3–4 mm.

Alternatively, a 100 mm-long needle may be used to go down vertically below the line of spinous processes at the lumbosacral transition point. At a depth of about 50 mm, there is bone contact with the lateral process of L5. The needle should then be carefully passed round its upper edge and advanced in the same direction with 15–20 ° convergence relative to the median plane, until it reaches the posterior peripheral quadrant of the vertebra. While maintaining bone contact, 5–10 mL are injected there. If the needle encounters the cartilage of the intervertebral disk, the injection must not be given until bone contact is established above or below it.

S1 Root

Irritation of the S1 root accounts for 15 % (36 % according to W. Scheidt) of all lumbago and sciatica. The disk prolapse presses on the lower edge of the fifth lumbar vertebra where S1 exits from the dural sheath, whilst the nerve exit as such is the first sacral foramen. The band of pain extends from the posterior aspect of the thigh via the popliteal fossa, calf, heel, and lateral malleolus to toes three to five. Maximum sensitivity to percussion is found three fingers' breadths caudally of the line joining the iliac crests. Pain is exacerbated by coughing and sneezing, Lasegue-Bragard is positive, the Achilles-tendon reflex negative, walking on tiptoe impossible.

Technique The entry point is 40 mm laterally of the line of the spinous processes, two to three fingers' breadths caudally of the line of the iliac crest between the lower edge of the lateral process of the fifth lumbar vertebra and the upper edge of the sac-

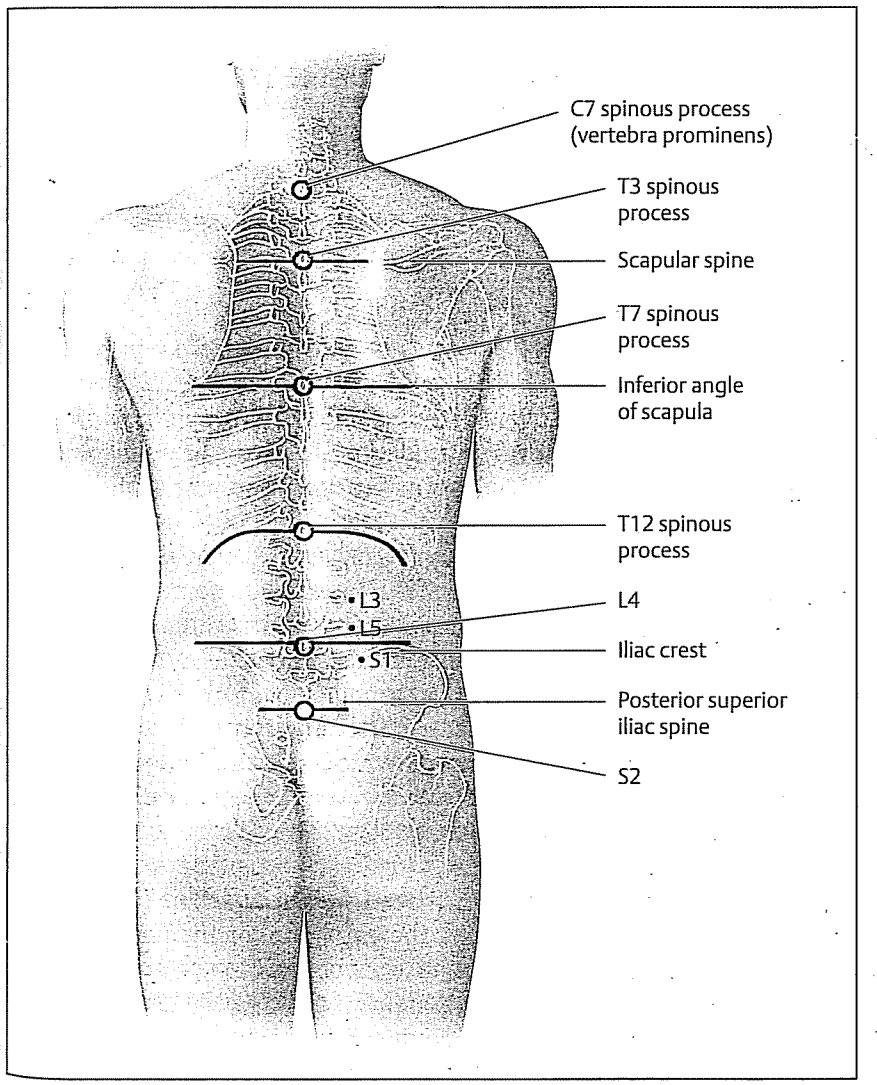


Fig. 3.59 **Spinous processes that provide useful posterior landmarks.** Posterior view.

rum (Fig. 3.**59**). The 80 mm-long needle is advanced at an angle of 45 ° to the skin in a caudal direction and slightly convergent (20 ° to median plane) until bone contact is made. It is then at the intervertebral foramen or the lower edge of the fifth lumbar vertebra. Not later than on injection of 5–10 mL procaine or lidocaine solution, the patient indicates the typical pain in the posterior aspect of the thigh and radiating down from there.

If there has been long-term dysfunction of the root at L5, motor paralysis may occur. Since an anesthetic at one level alone cannot produce paralysis, injection of more than a single level should never be attempted in a session. The patient should be supported and kept under observation until the anesthetic effect has passed off. While they are waiting to be fit for the road (30 minutes to an hour for procaine, 1–2 hours for lidocaine), the physician should explain to them that this temporary paralysis is harmless.

An accidental endodural injection into a saclike protrusion of the dura mater can generally be avoided by prior aspiration in two directions, turning the needle through 180 ° in between. The needle should never be at an angle exceeding 25 ° convergence to the median plane. But if, on a rare occasion, the dura is penetrated, this is not such a serious matter, since at the worst all that can happen from L3 down is lumbar anesthesia that paralyzes both legs while it lasts. The patient should be reassured and laid flat with their head raised. Their circulation should be closely watched and if necessary they should be given a peripheral vascular stimulant.

Lumbar anesthesia as such is harmless and in such cases may be particularly effective. See possible complications on page 374. If the patient has been suffering from lumbago and/or sciatica for some considerable time or if after disk surgery a series of bilateral L5 and S1 anesthetics produces no positive response, this may be due to adhesion of a liquor protein precipitate in the lumbosacral peridural cavity (adhesive arachnitis). In such a case the solution injected can no longer diffuse as far as the longitudinal ligament. The adhesion can be dislodged by one or two → (T) epidural injections into the sacral hiatus of 30–40 mL 1 % procaine solution. Once that is done, the injections to the nerve root can again become effective.

Procaine treatment of the roots of the sciatic nerve raises the irritation threshold, which had become reduced by the mechanical irritation of the sympathetically innervated longitudinal ligament. The patient should be clearly informed that physical exercises and activity can help the healing process. Immobility is like poison for patients suffering from root sciatica! Let them move about and go for walks. In cases of long-term disorders, the iliosacral → (T) joint is always "blocked" and injections into this joint will help to reduce pain when moving. If the sciatic root disorder is followed by circulatory dysfunction in the lower extremities, we have to inject to the → (T) sympathetic chain at L3.

Cauda Equina Compression Syndrome

Collapse of the median mass can compress the cauda equina. The symptoms are severe pain, flaccid paralysis of both legs, sensory dysfunction ("saddleblock anesthesia"), paralysis of bladder and rectum, and absence of an Achilles-tendon reflex. Any attempt to use neural therapy in such cases is strictly out of the question. The patient must be referred as an emergency for immediate neurosurgery, since their fate may be decided in a matter of hours.

In his *Textbook of Neurology*, W. Scheidt analyzes 559 lumbar disc prolapses with root involvement. His findings differ considerably from Reischauer. He lists the involvement as follows:

L4: 5 %;
L5: 20 %;
L4 + L5: 7 %;
S1: 36 %;
L5 + S1: 18 %;
L4 + L5 + S1: 11 %;
cauda equina: 3 %.

2. Epidural (Peridural) Anesthesia

See page 330.

3. Presacral Infiltration

See page 334.

4. Injection into and to the Sacral Plexus***

Anatomy The majority of the branches belonging to the sacral plexus, including the pudendal plexus, exit the pelvis through the infrapiriform part of the greater sciatic foramen:

a. pudendal nerve, which leaves the gluteal area after 20 mm through the lesser sciatic foramen;
b. sciatic nerve, which descends to the thigh, covered by the gluteus maximus muscle;
c. posterior cutaneous femoral nerve, which follows the path of the sciatic nerve;
d. inferior gluteal nerve, which runs inferior to the gluteus maximus nerve.

Materials 1 mm diameter × 100–120 mm-long needle.

Quantity 5 mL.

Technique To locate the sacral foramen, we need to draw two guide lines, the entry site for the needle being at their point of intersection:

- The horizontal line runs from the top of the natal cleft to the upper border of the trochanter major.
- The vertical line runs from the lateral dimple of

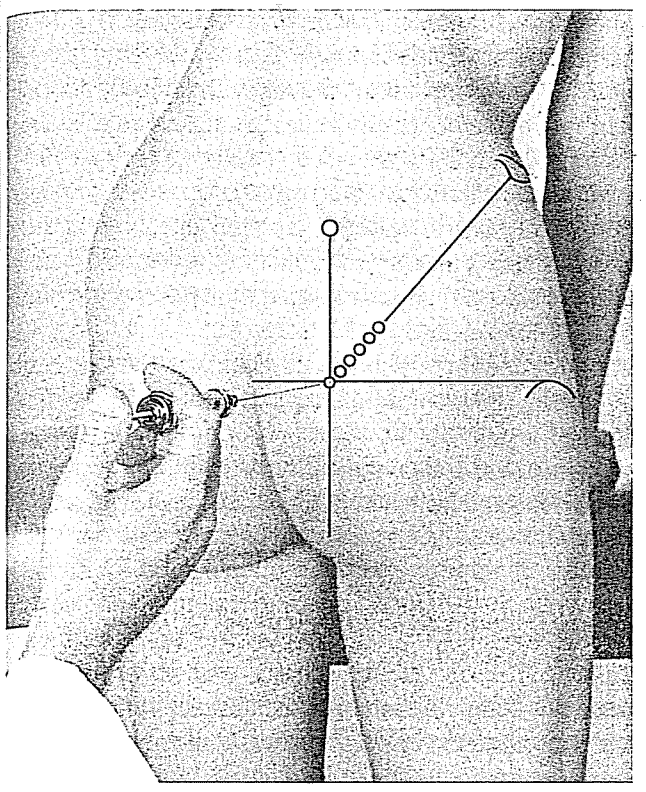


Fig. 3.60 **Injection to and into the sacral plexus.** The illustration shows the guide lines whose point of intersection marks the injection site: a: the horizontal line joins the upper border of the trochanter major with the top of the natal cleft; b: the vertical line runs from the upper posterior iliac spine (the lateral dimple of the erector spinae in the small of the back) to the outer edge of the ischial tuberosity. The dotted line shows the width of the nerve plate, the dashed line indicates the direction to the anterior gluteal tuberosity in which we find the various parts of the plexus.

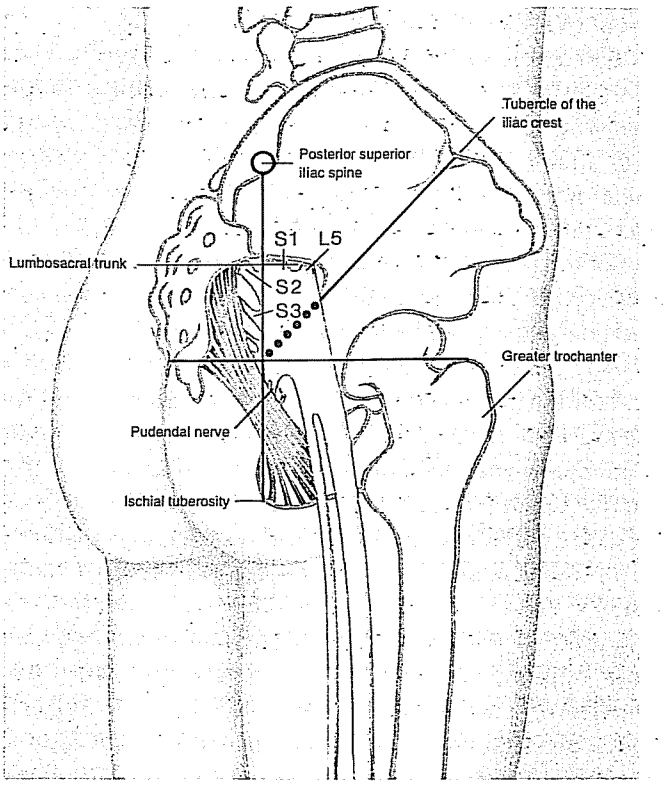


Fig. 3.61 **Injection to the sacral plexus.** Auxiliary lines to help in locating the plexus.

the upper posterior iliac spine to the outer border of the ischial tuberosity.

From the point of entry the needle penetrates vertically until bone contact is made. **Caution:** because in a rough approach, the tip of the needle can bend and the barb can tear nerve fibers. Since the nerve plate is 35 mm wide, we need to infiltrate from this point obliquely up and outward (10–11-o'clock position left, 2–3-o'clock position right). There is absolutely no risk attached to doing so by advancing and withdrawing the probing point of the needle. The more thoroughly the 5 mL are distributed, the better the result will be. In proceeding as described, from below and medially upward in a lateral direction, the patient will note the following sequence of paresthesia, corresponding with the nerve plate of the sacral plexus (see Figs, 3.**60**, 3.**61**):

- testicles, penis, perineum (pudendal nerve); then
- thigh and buttocks; and finally
- leg and foot.

Since these injections affect muscle nerves, the patient needs to be supervised after the injection until the effects of the anesthesia have subsided and the patient is fit to participate in traffic. Patient and assistant have to be made aware of this.

5. Posterior Sacral Foramen and Sacroiliac Joint

See pages 341 and 309.

6. Gluteal Region**

In the region of the buttocks the sciatic nerve lies exactly midway on the line joining the trochanter major and the tuberosity of the ischium. The patient lies on their sound side, with the sound leg extended and the affected leg flexed. The doctor now presses the left forefinger down on the site indicated and inserts the 100 mm-long needle, which must not be too thin, in front of the fingertip, guiding it in slightly obliquely upward until the patient reports a twitching sensation into the extremity. We give about 1 mL intraneurally and the same amount perineurally.

Probing pressure of the thumb on the tuberosity of the ischium tells us whether there is a bursitis that is producing or accompanying the sciatic pain. If there is, we need to deposit a small amount of procaine where the probing point of the needle produces a particularly severe pain.

7. Branches of the Sciatic Nerve**

Patients often complain about pain in the area of the calf, even after the sciatic disorder has been successfully treated. The sciatic nerve divides in the center of the thigh (or after its entrance into the popliteal fossa) into the tibial nerve and the common peroneal nerve. We can find the sciatic nerve before its division by palpating the popliteal artery at the level of the popliteal fold and inject one hand's breadth above it. The nerve is located laterally to the femoral artery.

We find the tibial nerve above the Achilles tendon in the lower third of the medial lower leg by firm pressure on the musculature there. We can also anesthetize it behind and below the medial malleolus immediately adjacent to the Achilles tendon laterally of the posterior tibial artery. The patient reports a twitching sensation forward as soon as we touch the nerve with the point of the needle.

After creating paresthesias in the area that is supplied by the common peroneal nerve, we can locate and anesthetize this nerve directly below the head of the fibula. See peripheral → (T) nerves of the ankle and post-sciatic circulation disorder (lumbar → sympathetic chain).

Sinuses, paranasal See page 213.

Spinal anesthesia See: → (T) peridural anesthesia (p. 330).

Spray treatment of nasal mucosa See: → (T) nasal spray (p. 314).

Stellate-ganglion anesthesia See: stellate → (T) ganglion (p. 352).

Supraorbital nerve See: → (T) nerves (nerve-exit points) (p. 315).

Sympathetic Chain and its Ganglia, Parasympathetic Head Ganglia, and Anesthesia of the Celiac Ganglion

Overview

The injections and complications listed below will be explored in the following section:

1. Sympathetic chain and its ganglia;
   a. injection to the stellate (cervicothoracic) ganglion, p. 352;
   b. injection to the upper and middle cervical ganglia, p. 359;
   c. injection to the lumbar sympathetic chain, p. 363;
   d. injection to the thoracic and sacral sympathetic chain, p. 364;
   e. possible mistakes and complications with injections to the sympathetic chain, p. 365;
   f. possible mistakes and complications with injections in the region of neck and chest, p. 365.
2. Parasympathetic ganglia of the head, p. 367:
   a. injection to the ciliary ganglion, p. 367;
   b. injection to the Gasserian (otic) ganglion and mandibular nerve, p. 368;
   c. injection to the pterygopalatine ganglion and the maxillary nerve, p. 369;
   d. injection to the submandibular ganglion, p. 371.
3. injection to the splanchnic nerves and the celiac ganglion, p. 371:
   a. possible mistakes and complications with injections in the abdominal and lumbar regions, p. 374.

1. Injections to the Sympathetic Chain and its Ganglia***

Injections into the sympathetic chain are a radical but also an extremely effective form of intervention to the neurovegetative system. Through this drug-induced temporary "sympathectomy," we interrupt miscommunication and pathogenic impulse transmission. These injections act more rapidly, more effectively, and for longer than injections to the → (T) afferent arteries and nerves, and are considerably more extensive in their effectiveness (as, for example, also on the opposite side of the body). Anesthesia of the sympathetic chain blocks all the higher-order tonic impulses. In other words, the tonus level of the vessels is lowered and hence blood pressure is reduced. Vascular dilation improves the blood supply to the related peripheral region, and the pain-conducting autonomic fibers are temporarily blocked.

Since these injections are a little more difficult and not entirely without risk, especially for the unpracticed, they should, as a rule, be considered only after therapy using all the other and simpler local measures has failed to produce the desired results!

The question of whether injections to the sympathetic chain may also be given on an outpatient basis or whether they should be reserved only for in-patient treatment has been conclusively answered by the results achieved in the experience of the large numbers of neural therapists all over the world, in the sense that they can be used so frequently and so successfully to bring relief that they should be an essential part of every medical practitioner's armory.

Caution: If the patient is receiving long-term treatment with anticoagulants such as Marcumar, no injections to the sympathetic chain and its ganglia may be given whenever the prothrombin value is less than 45 %. Special care is indicated where the prothrombin value is below 70 %, when injections should be avoided

in all but the most urgent indications, and vitamin K_1 kept in readiness as an antidote. After the injection the patient should be kept under medical observation for several hours.

Following anesthesia of the sympathetic chain, after blocking the action of vasoconstrictors, the blood pressure is reduced. Hence, in the case of hypotensive patients who may be liable to collapse, they should be kept under observation and, if necessary, kept lying down for a few minutes. However, in a German prisoner-of-war camp in Russia during World War II, Gerecht made a notable observation that would seem to contradict this. Of 300 practically moribund soldiers who were consigned to the camp suffering from starvation, which had practically reduced them to skeletons, and from shock due to cold injury, the first 100 died of circulatory failure despite medical treatment, since all cardiac and circulatory stimulants failed to act. When he noticed that, after two stellate ganglion anesthetics, a patient suffering from causalgia not only became pain-free but that his circulation, which had been in a state of total collapse, also made an astonishing recovery, he immediately gave all others who had arrived in the same desolate state a procaine injection to the cervical sympathetic chain, a paravertebral infiltration, or sacral anesthesia, depending on the most severe peripheral damage, and lost only one out of the remaining 200! One is tempted to conclude that in these cases sympathetic anesthesia produced a life-saving effect in what would normally be irreversible circulatory conditions and mobilized the last remaining reserves favoring survival.

The best prophylaxis against possible complications is the use of small quantities for these injections and a perfected technique in their administration. This technique can be learned without undue difficulty. For a doctor to refrain from these injections out of consideration for his or her own safety would be so unethical that there cannot be any discussion as to whether he or she should proceed. Schmitt has said that with the right technique injections to the stellate ganglion, which for so little reason the general practitioner approaches with so much reluctance, are "no more dangerous than intravenous injections." This applies to all the injections in this series!

In very many disorders it is immaterial whether the injection to the sympathetic chain is given in the cervical or the lumbar region. What matters most is to produce a direct thrust into the neurovegetative system via this "vital nerve," in order to correct the disturbed equilibrium. Generally, unilateral injection will suffice, possibly alternately left and right. With the small quantity of an average of 2 mL of procaine normally used per injection (except to the stellate ganglion) there is little to fear from injecting both sides at the same time, provided this is indicated and the correct technique used. As a rule, treatment is initially repeated weekly, and subsequently at longer intervals (e.g., if the symptoms recur). These anesthetic injections are also appropriate following resection of the sympathetic chain, since the sympathetic connections re-form soon after such an operation.

We intentionally avoid describing our injections as "block" anesthesia. This term comes to us from neurology. The healthy cell is hyperpolarized by being supplied with chemical energy from the local anesthetic and is temporarily unable to respond to stimuli. This is known as an "anode block." But in neural therapy, the decisive factor does not reside in any "healing anesthesia." What we have to do is to produce a positive charge to chronically altered tissue whose pathologically reduced membrane-resting potential has become a permanent state. Here, the injection has an immediate recharging effect and acts to stabilize the cell potential. In other words, the cell membrane is protected against too rapid and too extensive a renewed discharge. In restoring normal bioelectrical conditions we are also reestablishing normal physiological conditions and once again link up the cell with the body's normal information exchange system. However, this neurovegetative and bioelectrically rehabilitative effect can be produced only if we succeed in bringing procaine into previously damaged depolarized tissue. This is why the correct injection site is so important. In neural therapy we block nothing. On the contrary, we remove the block that is there and that has hitherto prevented the body's self-healing powers from becoming effective. We need to remember again that small quantities of anesthetic are perfectly adequate for this purpose, since the healing stimulus to restore this equilibrium can be produced by quantities well below those required for anesthesia.

Anatomy The sympathetic system comprises the sympathetic chain and its ganglia, the nerves leading from it and their plexuses. The sympathetic chain consists of:

- the cervical chain with three ganglia, with branches to the carotid and subclavian arteries and to the heart;
- the thoracic chain with branches to the aorta, the subclavian artery, the lung, and the splanchnic nerves;
- the lumbar chain and its four or five ganglia;
- the sacral chain and its four ganglia.

The treatment of sympathetic nerves and ganglia is possible without blocking any spinal nerves, at the stellate ganglion, at the upper kidney pole in the region of the splanchnic nerve and at the lumbar sympathetic chain.

1a. Injection to the Stellate (Cervicothoracic) Ganglion***

Anatomy The sympathetic chain runs ventrally left and right of the vertebral column, from the level of the first cervical vertebra to the coccyx. In the cervical region it has only two or three ganglia. In 70% of all cases the lowest of these is combined into a single entity with the first thoracic ganglion and together with this forms the stellate ganglion. This is 10–30 mm long and 0.3–1 mm thick. The ganglia of the sympathetic chain are linked interactively section by section via the communicating rami to the spinal nerves issuing from the spinal cord. The stellate ganglion lies on the head of the first rib, about 10 mm laterally from the first vertebral joint and 25–30 mm from the median line of the body. Amongst all the sympathetic ganglia, this ganglion occupies a place of special importance, for it is the largest neural control center apart from the central nervous system. It has afferent and efferent branches leading to the sympathetic thyroid and parathyroid plexuses, the phrenic, recurrent and vagus nerves, vascular branches to the vertebral, subclavian, and interior mammary arteries, and an accelerant nerve to the cardiac plexus.

The stellate ganglion provides the autonomic innervation of the whole upper quadrant of the body. In addition to a purely regional effect, anesthesia of this ganglion alters the tonic state of the entire neurovegetative regulating system. Following anesthesia to the stellate ganglion, the quantity of blood and flow rate increase by 20% and oxygen saturation rises by as much as 50%. If repeated a sufficient number of times, this injection restores the equilibrium between vasoconstriction and vasodilation. Heppner stated that the disappearance of a cerebral edema following such an anesthetic suggested normalization of the endothelial barrier. The far-reaching importance of this control center is shown by the extensive list of indications for this injection. The therapeutic potential of treatment with local anesthetics in internal medicine, neurology, pulmonology, ENT, ophthalmology, and orthopedics is far too little used in practice. The reason for this is doubtless that many physicians are afraid of the risks inherent in this injection. This fear is groundless, as I hope to show.

Indications Of primary interest are all arterial (not merely vasospastic) and venous circulatory dysfunctions, lymphatic occlusion in the head, the cervical region, and the upper part of the body, with their many possible sequelae, including pain due to autonomic causes, and trophic or tonic tissue changes:

1. *In the upper half of the body:* Frostbite, burns, slow-healing fractures, angiospastic circulatory disturbances of the Raynaud type, venous dysfunctions, lymphatic occlusion, puerperal mastitis, and hyperhidrosis; all pain symptoms in the head, chest, and arms, herpes zoster; to improve circulation after surgery.
2. *Head:* Pre- and post-apoplectic syndrome, cerebral edema and embolism, intracranial vascular spasms, certain forms of headache and migraine, post-concussional syndrome, dizziness, traumatic epilepsy, paralysis of the facial nerve, persistent facial edema following erysipelas; as supportive therapy in meningitis; venous thrombosis of the sinuses.
3. *Eyes:* Occlusion of the central retinal artery, thrombus of the central vein, diseases of the vascular membrane, abnormal pigmentation of the retina, degenerative disorders of the macula, ophthalmic herpes zoster, glaucoma etc.
4. *Ears:* Allergic disorders, frostbite, chronic suppurative otitis media, pressure in the ear, Ménière disease, deafness of the inner ear, tinnitus, sudden onset of deafness, otic zoster etc.
5. *Nose:* Vasomotor rhinitis, ozena, chronic suppuration of the sinuses etc.
6. *Throat and neck:* Hyperthyroidism, neuralgia, goiter, osteochondrosis of the cervical spine, cervical syndrome and all symptoms resulting from irritation of the cervical sympathetic system and of the nerve roots, rheumatic torticollis, septic tonsillitis, tonsillar abscess, tubercular laryngitis; to relieve pain in inoperable carcinoma of the larynx and hypopharynx.
7. *Shoulder:* Shoulder-arm syndrome, scalene syndrome, capsular arthritis, arthrosis deformans, subacromial bursitis, cervical migraine, post-traumatic stiffening of the joints, etc.
8. *Arm:* Brachialgia, causalgia, phantom-limb pains, brachial-plexus neuralgia, post-traumatic osteochondrosis; periostosis such as epicondylitis, styloiditis, tendinosis, painful joint dysfunctions, thrombosis and embolism in the arm, lymphatic edema following mastectomy, slow-healing wounds of any kind, acrocyanosis, Raynaud disease, obliterating thrombo-angiitis, joint pains, post-phlebitic edema and other circulatory disturbances; conditions following arterial injury. Also for diagnostic-prognostic testing before vascular surgery.
9. *Lungs:* Bronchial asthma, pulmonary hemorrhage, perforating injury to the lung, pulmonary edema (also in malignant hypertension with cardiac insufficiency in nephrosis and pre-uremia), tuberculosis of the lung, pneumonia, pleurisy, herpes zoster etc. In pulmonary embolism, procaine is injected bilaterally, with an interval of about 25 minutes between the two injections.

10. *Heart:* Angina pectoris, conditions following myocardial infarction, ventricular fibrillation, paroxysmal tachycardia, cardiac decompensation, and raised ST section in ECG etc. Whilst Killian warns against stellate-ganglion anesthesia in recent cardiac infarcts, because it will block the accelerant fibers, Arnulf, Braeucker, Leriche, Schmitt, and others emphatically recommend it also in recent infarcts. Since there have been particularly frequent reports in publications of fatal complications with regard to asthmatics and patients with angina pectoris (with or on the verge of cardiac decompensation), restraint is indicated with this type of patient.
11. *General disorders:* Eclampsia (in addition to injecting to the stellate ganglion, an injection should also be given to the abdominal → (T) sympathetic chain at the upper renal pole), epilepsy, status epilepticus, hyperhidrosis in the upper part of the body, and other autonomic disorders.

Possible contraindications **Warning:** caution is required in the case of bronchial asthma approaching decompensation. Fatal incidents have been reported! Anticoagulant therapy is an absolute bar against injections into the vicinity of any vessels. If possible, in recurrent nerve paresis, pneumothorax, or contralateral lung resection, the unpracticed should refrain from giving this injection, on the grounds of safety. In pulmonary emphysema and apical cavities, the only method that should be used is the one I recommend.

Statistics The surgical unit of the Leipzig university hospital has confirmed the efficacy of stellate-ganglion anesthesia for disorders of the upper extremities. Two hundred and fourteen patients suffering from post-traumatic osteoporosis, cervical-spine syndrome, disturbed peripheral blood supply, epicondylitis, and humeroscapular periarthritis were treated eight times on average. An improvement was achieved in 76 % of these, of whom 44 % became completely symptom-free and in the other 32 % all pathological changes regressed.

There can be little doubt that any neural therapist with a perfect command of the method would have been successful in at least some of the 24 % failures, by combining this with other injections in the segment or by the elimination of the interference field responsible.

Materials For Herget's or Leriche's methods, 0.8–1 mm × 60 mm needle; Dosch: 0.7 mm × 32 mm (size 12) or 0.9 mm × 40 mm (size 1); Reischauer: 1 mm × 100 mm.

Quantity 2–5 mL of a local anesthetic suitable for use in neural therapy is all that is required! The amount of 20 mL of 1 % procaine solution used by surgeons is too large and can produce dangerous reactions simply by causing pressure on the nerves.

Technique The relevant literature describes a total of 34 methods using the anterior, lateral, and posterior approaches! We shall limit ourselves to considering three of these that have proved themselves over the years:

Herget's Method*

This is the preferred method in Europe. Because it is the best-known technique (see Figs. 3.**62**, 3.**63**, 3.**64**) in this part of the world, this will be described first.

The patient lies on a flat support. They are instructed not to talk or swallow during the injection and not to move their head. A firm pad is pushed under their shoulders so that the head is bent straight back and the cervical spine is hyperextended. The entry point for the 60 mm-long needle is midway between the first ring of the trachea and the upper edge of the sternum, but two to three fingers' breadths in a lateral direction on the inner edge of the sternocleidomastoid muscle. This site can also be found by dividing the distance from the mastoid process to the sternal attachment of the sternocleidomastoid into three equal parts.

The entry point is then at the transition from the caudal to the middle third. When we have found this point, we let the patient breathe out and hold their breath, to let the lung move as far down as possible. The needle is inserted briskly in the direction of the projecting spinous process of the seventh cervical vertebra (vertebra prominens), which should be marked with one of the fingers of the free hand to ensure that the correct direction of thrust is maintained. At a depth

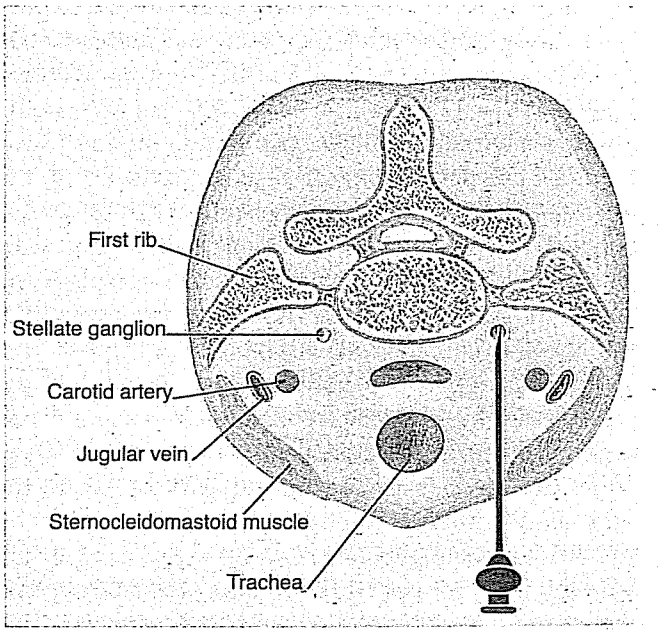


Fig. 3.**62** Diagram showing the position of the stellate ganglion in front of the head of the first rib.

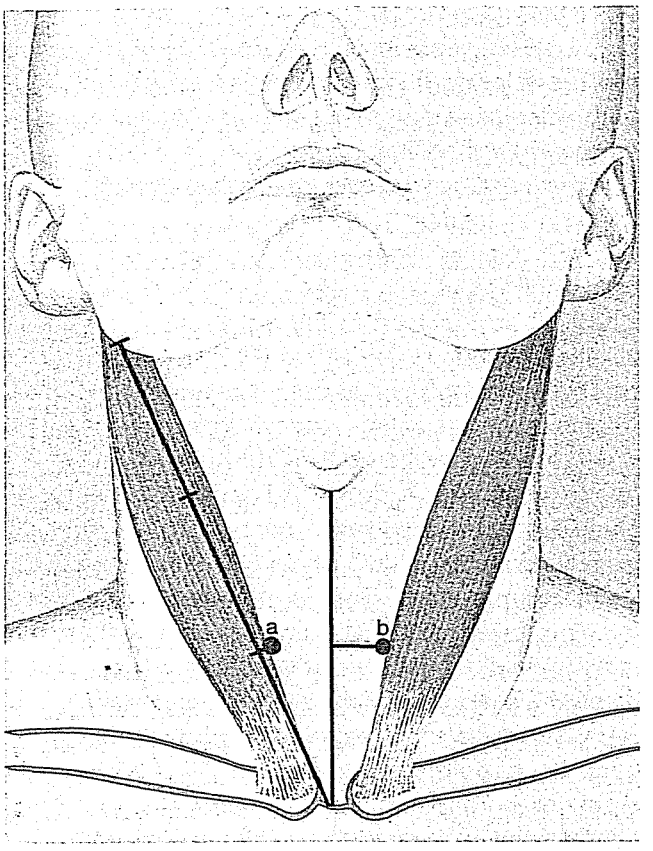


Fig. 3.63 **Finding the entry point for the injection to the stellate ganglion according to Herget.**

a. Divide the length of the sternocleidomastoid muscle into three equal parts. The entry point lies on the anterior edge of the muscle at the transition from the caudal to the middle third.

b. At the level of the mid-point between the first ring of the trachea and the upper edge of the sternum, thence laterally to the anterior edge of the sternocleidomastoid muscle.

of 40–50 mm we find a bony resistance, the head of the first rib. The point of the needle is now on the head of the first rib (or the lateral process of the seventh cervical vertebra), and the stellate ganglion lies in front of this.

The needle is withdrawn only about 1 mm, since an injection under the periosteum can result in considerable post-traumatic symptoms. If the needle enters the ganglion itself, the patient feels a dragging pain in the shoulder region. In that case, the needle should also be withdrawn 1 mm. Surgeons inject 10–25 mL, in order to "bathe" the ganglion and to include the middle cervical and the four uppermost thoracic segments of the sympathetic chain in the block. We know that such a large quantity can produce a dangerous carotid-sinus reflex when the neck is hyperextended back in this way, and believe that this is responsible for some of the accidents that have been reported.

We inject only 2–5 mL of 1–2 % procaine or of a 0.5–1 % lidocaine solution such as Xyloneural. One reason is to avoid any risk of complications due to too large an amount of fluid; another is that the intended neural-

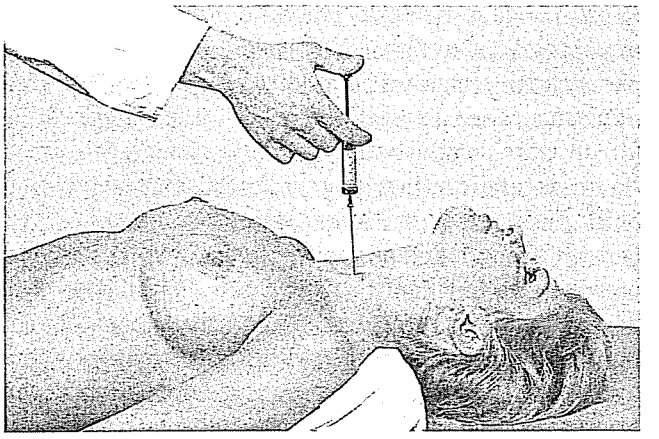


Fig. 3.64 **Injection to the stellate ganglion according to Herget.** The division into three equal parts of the length of the sternocleidomastoid muscle and the clavicle is marked. The dotted line shows the apex of the pleura.

therapeutic effect can be achieved equally well with these small quantities of low-concentration solutions (without the addition of vasoconstrictors!), amounts well below the threshold level for anesthesia. If the patient has a goiter, this can be pushed to one side, but no harm is done if the needle passes through the thyroid.

If we want to block the cervical sympathetic chain directly, the needle should be lowered slightly in a caudal direction. But this is riskier and offers no advantage compared with that to the stellate ganglion, and is thus not recommended! We are already familiar with the most important safeguards. **Caution:** always aspirate before any injection in a cranial direction from the heart! Injection (particularly of larger quantities) into any vessel leading to the brain or into the liquor cavity can lead to dangerous complications!

In order to avoid such complications and run no risk of accidentally injecting intra-arterially, we aspirate, turn the needle through 180° and aspirate again. It could happen that the needle is tangential and so close to the carotid or vertebral artery that the inner arterial wall is aspirated and closes the opening. In that event the patient could still receive an intravasal injection despite a negative result from aspiration. An added safeguard against the accidental administration of a relatively large quantity intra-arterially is therefore to inject only a few tenths of a milliliter of the local anesthetic while closely observing the patient for a few seconds. If they show no reaction, which might suggest an accidental intravasal injection or intolerance (nausea, vertigo, somnolence, tinnitus, or flashing in front of their eyes), the remainder can be injected briskly.

Anesthesia of the stellate ganglion produces a homolateral Horner syndrome with ptosis, myosis, and enophthalmus: for anything from a few minutes up to 30 minutes, the pupil and the palpebral fissure will constrict, the eyeball sinks back, the homolateral conjunctiva reddens, and the secretion of sweat and tears

ceases. There is active hyperemia of the vessels of the brain, face, and arm. Any joint pain that may have been present in the arm disappears. The eardrum is notably reddened. Given the small amount of procaine used, the appearance of Horner syndrome is a desirable reaction and is generally present. But it is not essential for the therapeutic effect, which need not run parallel with the extent to which a complete Horner syndrome is produced.

After the injection, the patient should be kept under medical observation until they are once again fully fit for the road. It is part of the physician's duties to draw their attention to this fact. When procaine is used, this will take about 30 minutes, in the case of lidocaine (because of its delayed resorption) this will increase to about 2–3 hours. With Carbostesin, 6–12 hours will be needed.

When procaine is used, the Horner syndrome appears and disappears quicker. With lidocaine, the onset is slower but it lasts longer. This has no impact on the neural therapeutic effects. In patients who suffered apoplexia a long time ago, and patients with other nerve damage, the Horner syndrome does not take place with the initial infiltration, but during the course of the treatment it increases in appearance. It seems as if buried pathways are excavated and revived.

For most therapeutic indications, a series of eight to 12 injections will be necessary, rarely more. The contralateral side should occasionally also be anesthetized. Normally, the injection is given only unilaterally. If it is intended to treat both sides in one session—required, for example, with pulmonary embolisms—we allow an interval of 30 minutes before the second injection when a 1 % procaine solution is used.

The Technique According to P. Dosch***

For several years, I applied the Herget technique as demonstrated to me by a surgeon using 10 mL Impletol. I did this until two incidents occurred in one day. I aspirated in one direction only and must have accidentally injected into the common carotid artery. I terminated the injection immediately when the patients fell unconscious for a few, never-ending minutes. One of them went into brief spasms. They finally came to with a retrograde amnesia but neither situation led to negative consequences. I was horrified and searched for a way to avoid pushing the needle blindly for several centimeters into the neck, which is rich with vascular and neural tissue, until contact with the bone is made. In a text by Leriche, I discovered a technique with an antero-lateral approach.

In the original technique using an antero-lateral approach, which was developed jointly by Leriche, Fontaine, and de Seze, the patient lies flat on their back and turns their head only slightly to the opposite side. A felt pen or skin pencil is used to draw a line two finger breadths above and parallel to the clavicle and another along the lateral edge of the sternocleidomastoid muscle. The 60 mm-long needle is inserted at the point of intersection of these two lines and advanced almost vertically downward with only a slight deviation in a medial direction, until after 30–40 mm it makes bone contact with the head of the first rib or the lateral process of the seventh cervical vertebra. After a negative aspiration test, 10–20 mL of procaine (but we only give 2–5 mL!) are injected.

I have adopted the lateral approach but have modified it considerably over time. The positioning of the patient's head is different, the point of injection is approximately 2 cm higher and slightly more lateral, and the injection is not made directly to the ganglion but in front of the transverse process of the sixth cervical vertebra. By pressing down with the fingers, possible complications with the lungs, vessels, and liquor space are avoided. The injection fluid descends on the fascia of the throat down to the stellate ganglion. The onset of the Horner syndrome confirms this. This method is considerably simpler, safer, and can be used in daily outpatient practice. It worked for me for 35 years without complications. My sons and students apply this technique, which greatly expanded their therapeutic options.

Technique In my method, the patient is seated on a chair with a neck support. If a neck support is not available, they simply lean their head against the wall after a pad has been placed under the back of their neck. They should lay their head back as far as they can and then turn it as far they can without difficulty in the opposite direction to the side to be treated. Now, the carotid tubercle should be easily palpable. On no account should the patient be allowed to turn the shoulder forward when they turn their head in this way or to draw in the neck out of fear!

We now divide the sternocleidomastoid muscle from the mastoid attachment to the attachment to the sternum into three equal parts and mark the transition from the middle to the caudal third with a quaddle, on the outer edge of the sternocleidomastoid. Then, depending on the length of the patient's neck, we place two or three fingertips of the left hand on the outer edge of the sternocleidomastoid in such a way that the caudal finger comes to lie on the upper edge of the sternoclavicular joint. The fingers are carefully pressed in to push the carotid artery and the jugular vein out of the way of the needle, and the distended apex of the pleura is also forced completely down and out of the way. This must be done gently and should not take too long, to avoid unnecessary irritation to the sensitive carotid sinus. Remember that a blow to this region in boxing can produce a knockout. (See Fig. 3.**65**.)

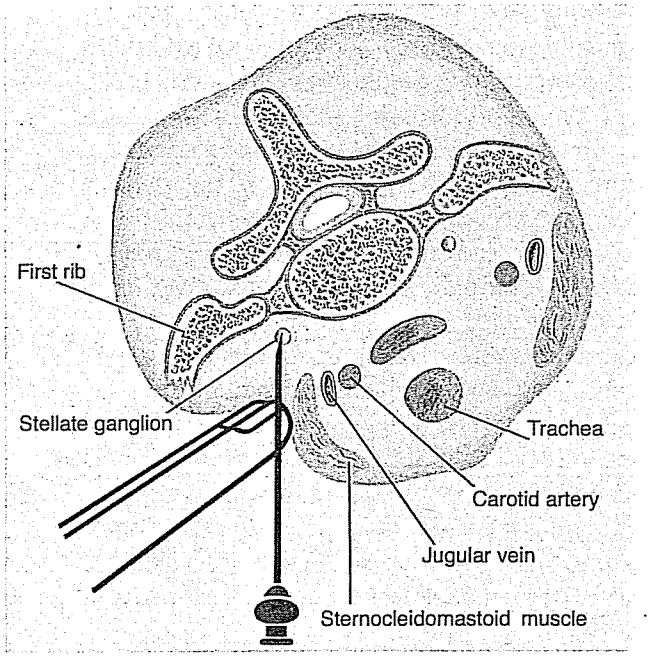


Fig. 3.65 Diagram showing the position of the needle in carrying out the injection to the stellate ganglion according to Dosch.

The finger in the cranial position on the neck can now feel the carotid tubercle of the sixth cervical vertebra as a small bony prominence and the patient pulls a face, because the pressure on the neurovascular bundle (formed by the common carotid artery, jugular vein, and the vagus nerve) against the bony substrate is unpleasant. Difficulty in locating the correct injection site can arise only if the patient has a very short, thick neck. In such a case, it is best to palpate the head of the rib by inclining the patient's head to the side to be injected and thus relaxing the soft tissue. We leave the palpating finger in place and then incline the head back and to the opposite side into the prescribed position. If there is a goiter, this is pushed aside, but no harm is done if the needle goes through it.

Only a 30–40 mm needle is used. This is inserted a short distance, immediately above the cranial finger, and is then guided deeper as far as bone contact, which is made practically subcutaneously! Even in the case of an adipose patient, if the needle fails to make bone contact at a maximum depth of about 20 mm, its position must be corrected without fail! The most important rule, by which we can avoid the only danger—that of accidentally injecting intradurally—is: throughout the injection with our short needle the palpating finger must maintain contact with the transverse process of the sixth cervical vertebra, and we must ensure that the point of the needle also remains in loose contact with it and does not slide further in!

In view of the limited depth at which we need to work, a 20 mm-long needle would be adequate. But since this also has a diameter of only 0.4 mm, it provides no assurance with regard to the aspiration test. We therefore use a needle 30–40 mm in length and 0.7–0.9 mm thick, but this must not, of course, be inserted all the way.

After bone contact, we withdraw the needle 1 mm, to avoid injecting subperiosteally, and aspirate in two directions by turning the needle through 180 °. After a negative aspiration result, in which no blood, air, or liquor must be aspirated, we inject a few tenths of a milliliter of the product and wait a few seconds while closely observing the patient. If they show no reaction that might indicate an intra-arterial injection or intolerance (nausea, vertigo, somnolence, tinnitus, flashing in front of the eyes), the rest of our 2–5 mL can be administered swiftly. Whenever the position of the needle is changed, or if the patient talks, swallows, or moves, we must aspirate again. In the seated patient, the local anesthetic descends along the prevertebral fascia to the stellate ganglion (cervicothoracicum).

If, as the needle is inserted, the patient feels an electric shock radiating to their fingertips, then the needle is too far in a lateral direction amongst the strands of the brachial plexus. After correcting the needle's position and observing the precautions stated, we may proceed with the injection. We sometimes seek out the brachial plexus intentionally for therapeutic reasons, but in such cases it is better to use a different method that includes all parts of this plexus (→ (T) nerves, afferent).

If, on occasion, blood or liquor is aspirated, something that has never happened to me in 35 years, the needle must be removed at once and the injection should not be attempted again that day. With a little practice and used correctly, this beneficial injection is no riskier than an intravenous injection (Schmitt).

After the injection of procaine, the patient remains sitting in the waiting room another half hour before being seen once more by the doctor and then being allowed to go home without hesitation.

The advantages of the Leriche (Dosch) method (see Figs. 3.**66**, 3.**67**) compared with Herget's are obvious:

a. The patient is seated. Positioning them correctly calls for no special arrangements. With the patient seated, the apex of the lung lies further down than when they are lying down. If, in addition, we tell them to breathe out, it will lie even further down. Hyperextending the neck is unpleasant and can easily create a sensation of anxiety. Against this, the seated patient feels the injection to be considerably less unpleasant.

b. When the patient turns their head, the common carotid artery and the jugular vein move medially out of the path of the needle, and when the fingers are pressed in, artery and vein are in any case both pushed completely out of the way (Fig. 3.**66**). Generally, the carotid tubercle (the well-developed anterior tubercle of the transverse process of the sixth cervical vertebra) can then be clearly felt further in, so that one does not have to penetrate into the unknown! The techniques of Herget and Leriche are directed more caudally for the head of the first rib in front of the body of the seventh cervical vertebra. My technique aims one vertebral level cranially for the transverse process of the sixth cervical vertebra. This provides greater safety through distance to the pleura, avoiding the risk to cause pneumothorax, which was a relatively frequent complication with the direction of the head of the first rib (Herget). Anatomical research has shown that the stellate ganglion is closely connected with the top of the pleura and even covered up to 70% by pleura (Hahn-Godeffroy, Jelisarowski). The only vital risk we can see is that of an accidental intradural injection, but this can be avoided not only by aspiration (hence never work with too thin a needle!) but also by observing the most important safety rule of all: when injecting, always maintain loose contact with the transverse process of the sixth cervical vertebra and take care not to slide further dorsally with the point of the needle. Neither of these is difficult to check and will prevent complications.

c. In asthmatics and patients with emphysema, there is no risk of perforating the distended apex of the lung, since this is also pushed down and out of the way with the fingers.

d. No special needle is required and it is even possible to administer this injection during a domiciliary visit to a bed-ridden patient.

e. Provided a few simple precautions are observed, complications are practically impossible, and it is true to say that this injection is no more risky than an intravenous one. It has proved its worth in my own personal experience in over 50 000 injections, with not a single mishap. Because of its enormous action radius, every practitioner should be thoroughly familiar with it and use it daily, wherever it is necessary and indicated.

Werthmann, a pediatrician from Salzburg, showed that my technique is successfully used with infants and toddlers. Parents and children usually reject lengthy segmental therapy, thus, the pediatrician

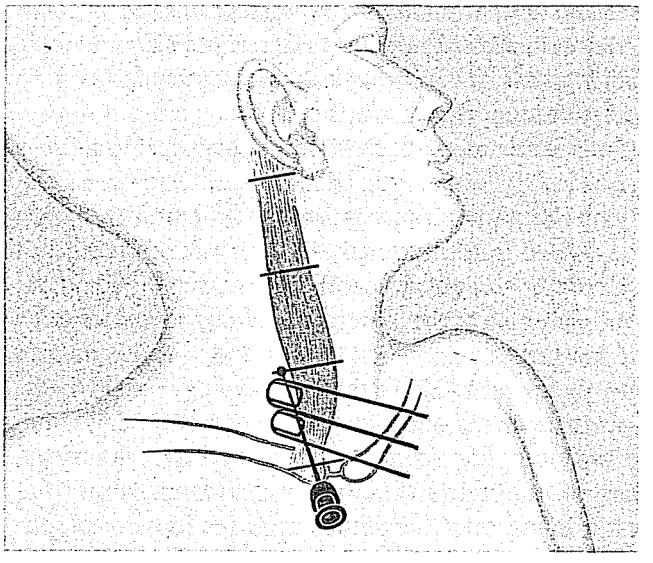


Fig. 3.66 **Diagram showing the injection site for the injection to the stellate ganglion according to Leriche's method as modified by Dosch.** The head of the seated patient is turned in the opposite direction to that of the injection and bent back. Two or three fingers of the left hand press in above the sternum on the outer edge of the sternocleidomastoid. The head of the first rib now lies almost subcutaneously above the topmost finger. In boxing, a blow to this area can produce a carotid-sinus reflex and may result in a knockout.

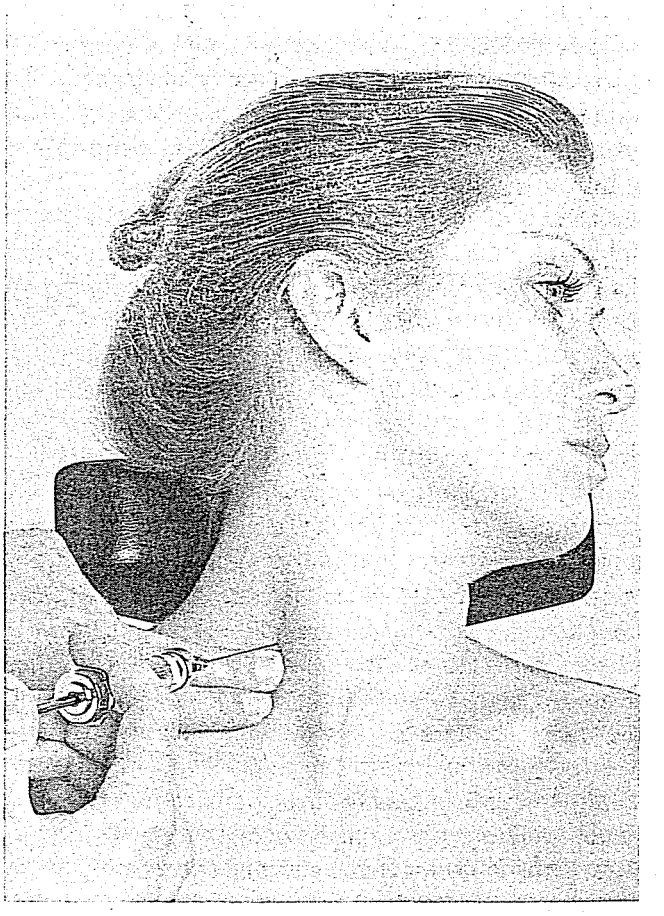


Fig. 3.67 Injection to the stellate ganglion according to Dosch.

has to search for quick results through few injections. The sympathetic chain can provide this option. Werthmann recommends my technique as safe and effective: "It can be performed under any condition."

During infiltration, the infant is lain down and older children sit on their parent's lap. The parent wraps their legs around the lower legs of the child, reaches with one hand around the upper arms and stabilizes the child's forehead with the other hand. The head is positioned posteriolaterally. In this position, the physician palpates the transverse process of the sixth cervical vertebra and injects, after negative aspiration, only 0.3–0.5 mL of a 0.5–1 % procaine solution 2–3 mm deep.

From 1978 to 1982, Werthmann performed 2681 stellate injections and doubled that number in the following 4 years. In 8000 stellate anesthesias in children he did not experience one patient with an adverse reaction to procaine or any other type of complication. In some patients blood was aspirated; consequently, the injection was not performed on the same day.

As particularly indicated for this type of injection, the experienced neural therapist lists the following:

1. Diseases of the respiratory tract are common in children. They are generally obstructive in nature. The Tiffeneau test immediately shows that the stellate infiltration improves air volume from 40–50–70 % and more. This is objective proof of the positive results. In the case of mucoviscidosis (cystic fibrosis), the secondary symptoms can be improved.
2. In the case of sinusitis and sinubronchitis, secretolysis of the mucous membranes is also stimulated.
3. Until 18 months of age, developmental disorders with persistent foramen ovale and cardiac septal defects show improvement in 50–60 % of the patients. Stellate injections support this improvement. Also, deeper breaths following the injection produce the hypobaric pressure necessary for spontaneous closure. The result is auscultatory and can be shown through phonocardiography (missing holosystolic murmur).
4. Spastic torticollis—in addition to local trauma of the head–neck area, the cause is damage to the extra-pyramidal system through encephalitis.
5. Reversible traumatic brain damage with motor restlessness or increased desire for sleep without desire to drink, following birth complications; in older children, post-concussional syndrome or conditions following meningitis and encephalitis.
6. Hearing disorders can be improved if they are detected and treated early. Every improvement is a success for the development of the child. This can be shown through children's audiometry.

Dittmar takes the view that perivasal infiltration around the → (T) subclavian artery with 2 mL of procaine is a complete substitute for the injection to the stellate ganglion. The post-ganglionic neurovascular fibers travel directly to the adventitial plexus of the subclavian artery. This way they reach the area supplied by the subclavia. By way of the → (T) vertebral artery this would include the area of the posterior cranial fossa and the inner ear. Although we hold this to be unlikely from theoretical considerations and, in the light of many years of experience, do not share his misgivings over the injection to the stellate ganglion, we are bound to point out this possible substitute.

Reischauer's Method*

To avoid the possible risks of an accidental intradural injection, Reischauer found a dorsal approach.

Technique The patient is seated on a chair, with the head inclined slightly forward. (See Figs. 3.**68**, 3.**69**.) The midline of the spinous processes is marked by a vertical line, then thin lines are drawn horizontally for the vertebra prominens (C7) and the spinous processes of C6 and T1. The 100 mm-long needle is inserted between C6 and C7 40 mm laterally of the line formed by the spinous processes, and is guided exactly at right angles to the surface of the skin and parallel to the median plane, to a depth of 40–50 mm until bone contact is felt.

If it is intended to reach the root of C8, the point of entry is halfway between the transverse lines marking the spinous processes of the seventh cervical and first thoracic vertebrae. On making bone contact, the point of the needle is at the overlapping lateral segments of the cervical vertebral arches.

It is then advanced carefully (under constant plunger pressure!) along these at an angle of 45 ° upward and laterally, i.e., in a divergent and cranial direction, until bone contact is lost, and can then be advanced (infiltrating) about another 10 mm in the fascial connective tissue of the tendinous muscle attachments, now, however, in a slightly convergent direction. It is then close to the root of C7 (or C8) and near the vertebral artery in front of the intervertebral foramen, but unable to enter it. The correct site for the injection is reached when the patient indicates the typical signal pain in the shoulder blade. Up to this point, about 2 mL will have been used, and another 2–3 mL are injected here. A Horner syndrome again indicates that the cervical part of the sympathetic chain has been successfully blocked. Reischauer himself used 20 mL of 1 % procaine with this injection technique, to which he (unnecessa-

rily) added Periston (collidon, PVP) to delay resorption.

1b. Injection to the Upper and Middle Cervical Ganglia**

Anatomy The area of the neck is crowded with many, primarily autonomic afferent and efferent fibers. The upper cervical part of the sympathetic chain is located dorsally to the common and internal carotid artery, in front of the transverse processes of the second to fourth cervical vertebrae, embedded in the deep fascia of the neck. The vagus nerve, located slightly lateral to it, runs in the sheath of the large vessels.

It branches out at the larynx and the heart and is connected to the cranial nerves IX (glossopharyngeal nerve), X (vagus nerve), and XII (hypoglossal nerve). Together with the external and internal carotid artery and the jugular vein, they also travel to the head. The vascular branches of the internal carotid plexus accompany all the branches of the artery to the inside of the skull and provide autonomic supply to the brain and the eyes. The caroticotympanic nerves branch off this plexus and form the tympanic plexus together with branches from the glossopharyngeal nerve. From here the minor petrosal nerve originates, which travels to the Gasserian (otic) ganglion and to the parotid gland. Another branch, the deep petrosal nerve, ends at the pterygopalatine ganglion. The external carotid nerves and their plexuses wrap around the artery of the same name, forming the external carotid plexus, which supplies the skull and its soft tissues, the larynx, and the thyroid.

The visceral rami of the upper cervical ganglion are part of the cardiac plexus. Together with branches of the vagus and glossopharyngeal nerve, they form as pharyngeal rami the pharyngeal plexus, which supplies the pharynx, while the laryngeal rami enervate the larynx after connecting with the upper laryngeal nerve.

Those areas of the head that receive their blood supply through the common carotid artery and its branches are affected by the upper cervical ganglion. Other areas that receive blood from the vertebral or basilar artery are innervated sympathetically by the stellate ganglion.

Indications and materials Due to the anatomic circumstances, there is a long list of indications. This injection reaches the sympathetic and vagus systems, their ganglia and anastomoses, the glossopharyngeal nerve, the pericarotid plexus, the aortic and carotid depressor nerves, the carotid body, the hypoglossus and spinal nerves. Thus, the indications are equivalent to those listed for the stellate ganglion,

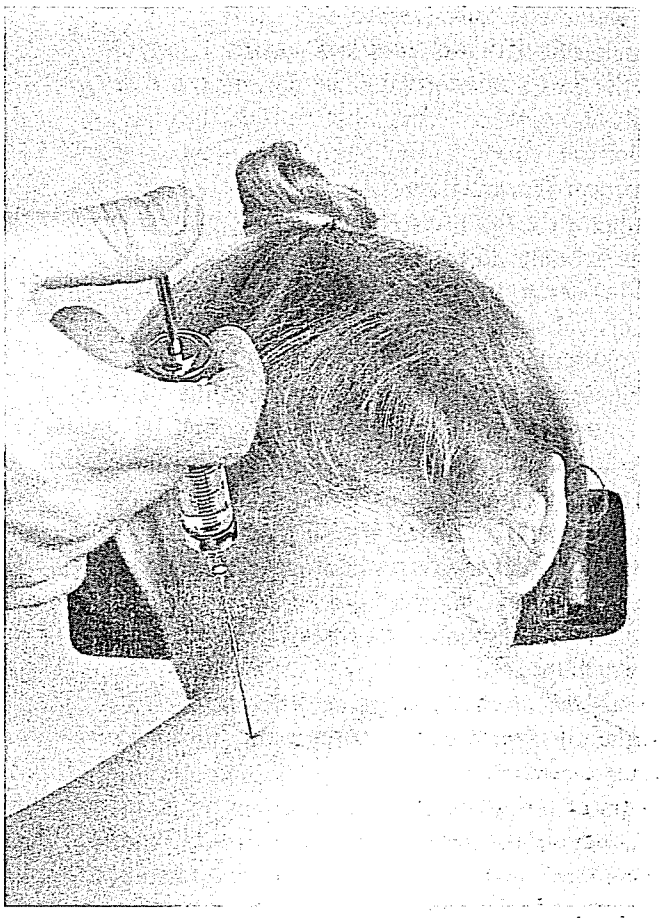


Fig. 3.68 **Reischauer's method.** The entry site in the method according to Reischauer lies between the spinous processes C6 and C7 40 mm laterally of the line of the spinous processes.

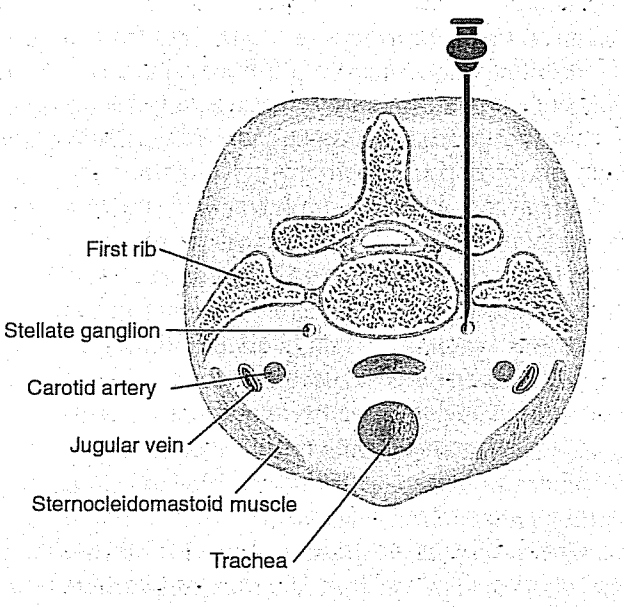


Fig. 3.69 Anatomy and position of needle in the injection according to Reischauer.

the vagus, and glossopharyngeal nerve. It is used for cerebrosclerotic and vasospastic circulatory disorders in the entire area of the head, particularly the brain; also for central stress caused by a cerebral interference field due to encephalomyelopathias with headache, vertigo, and depression. In this way, it is a substitute for the → (T) cisternal procaine injection, which is actually illegal in Germany. It is also indicated in therapy-resistant complaints in the area of the cervical spine, migraine, and trigeminal neuralgias, particularly of the first branch; also for all allergic disorders (bronchial and cardiac asthma, eczema, hay fever, chronic urticaria). If simple injections fail, it is also recommended for pharynx, larynx, thyroid, ears, and eyes. It is indicated for interference fields in the head area, if they do not respond well to other measures because of secondary irritation of the head ganglia.

According to Descomps, anesthesia of this region affects the following:

- *Nervous reactions:* These reduce the nociceptive centripetal stimuli, the centrifugal commands of autonomic reactions and badly adapted stimuli of a large number of regulatory systems by about half; they "relieve" the reticular formation and the cerebral cortex of an excess of subtle stimuli and prevent some hypothalamic reactions.
- *Hormonal, particularly pituitary reactions:* It is surprising and at the same time exciting to find that disorders that retrostyloid anesthesia influences favorably and that are regarded as adaptation disorders respond to this quasi-physiological reactivation of what Selye calls the pituitary-cortex-suprarenal axis and that this is achieved without exogenous corticotherapy.

The far-reaching effect of this injection becomes obvious when one considers that the upper cervical ganglion also supplies the pituitary and pineal glands (hypophysis and epiphysis) through the periarterial sympathetic pathways of the internal carotid plexus.

Pituitary and hypothalamus form a morphological and functional control-circuit, i.e., centers in the hypothalamus are reached that are superior to the autonomic nervous system. They control, for example, temperature, blood pressure, and respiration, genital functions, wake–sleep cycle, lipo and hydrogen metabolism, and perspiration. The hypophysis produces approximately 20 different hormones and monitors and coordinates the finely tuned collaboration of all peripheral hormone glands.

The endocrine pineal gland secrets noradrenalin, serotonin, and melatonin, which is exclusively produced there. Its secretion depends on the circadian rhythm: light reduces the melatonin and adrenalin production and increases the serotonin effect, which regulates the stimulation of the smooth muscles. Melatonin reduces the activity of the thyroid and stimulates the parathyroids.

According to Pelz, anesthesia of the upper cervical ganglion has the following effects through the epiphysis alone:

1. Anovulatory cycle disorders, such as primary or secondary amenorrhea are eliminated.
2. Retardation of growth is removed, as long as the epiphysial plates are not closed.
3. The calcium level is increased through the parathyroid glands.
4. Thyroid hypertrophy, including Basedow, is normalized, if it is caused by pituitary or hypothalamus disorders.
5. Sclerodermia and Dupuytren's contracture improve due to positive change in trophicity.
6. Some types of anemias and leukemias improve due the effect on the blood-producing systems.
7. Cerebral circulatory disorders improve; also post-traumatic epilepsy, optic neuritis following alcohol and nicotine abuse, etc.

Contraindications In patients with dangerously high blood pressure with the risk of a stroke, an injection to the upper ganglion should be avoided. If the x-ray shows the sella turcica to be substantially constricted, severe headache must be expected to follow the injection, since the anesthetic produces vascular dilation in the pituitary region. Procaine allergy and the use of long-term anticoagulants (Marcumar, Sintrom, etc.) or other coagulation disorders prohibit this injection, so do diseases of the central nervous system, such as cerebral atrophy, brain damage with loss of tissue, multiple sclerosis, amyotrophic lateral sclerosis, and pyramidal signs (positive Babinsky reflex).

Materials Needle: 60–80 mm length, 0.8 mm thickness.

Quantity 2 (–5) mL.

Technique

a. In 1984, the neural therapist, J. Goebel, described a simple and safe technique for anesthesia of the upper cervical ganglion. He reflected on the fact that the posterior pharyngeal wall is separated from the deep neck fascia only by the narrow connective tissue of the retropharyngeal spatium. This allows one to maintain visual control over the needle, while closely approaching the ganglion through the mouth. The ganglion is located in front of the transverse processes of the second and third cervical vertebrae (Fig. 3.**70**).

Before beginning the infiltration, the patient needs to be informed about the possible side-effects of the injection. This allows patients to prepare themselves mentally and avoid anxiety.

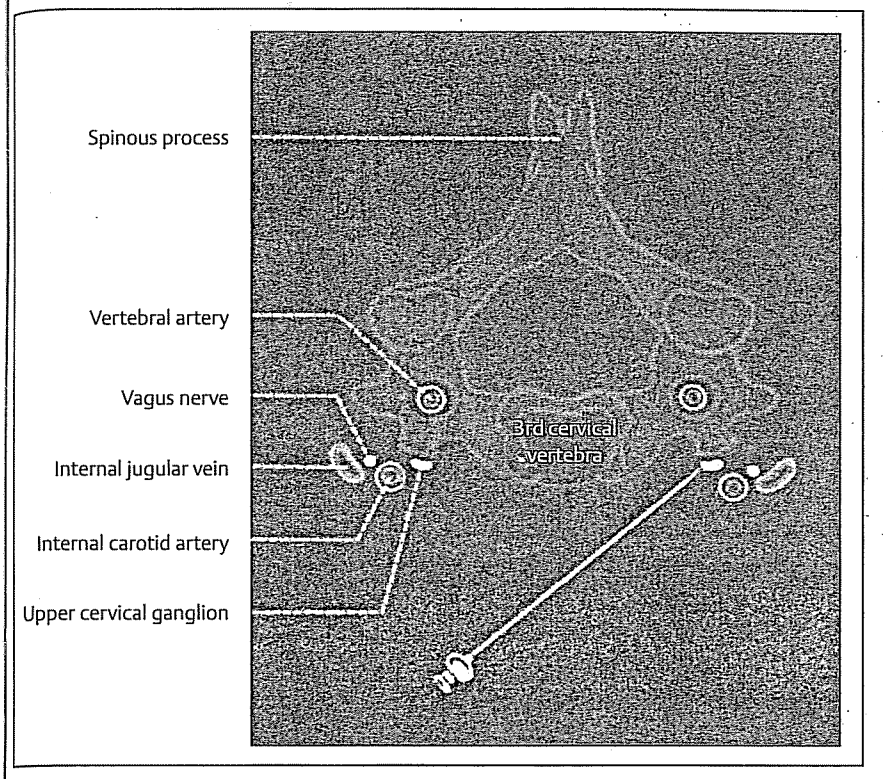


Fig. 3.70 **Injection to the upper cervical ganglion (according to Goebel).** Anatomical drawing: the ganglion is located in front of the transverse process of the second or third vertebra behind the internal carotid artery.

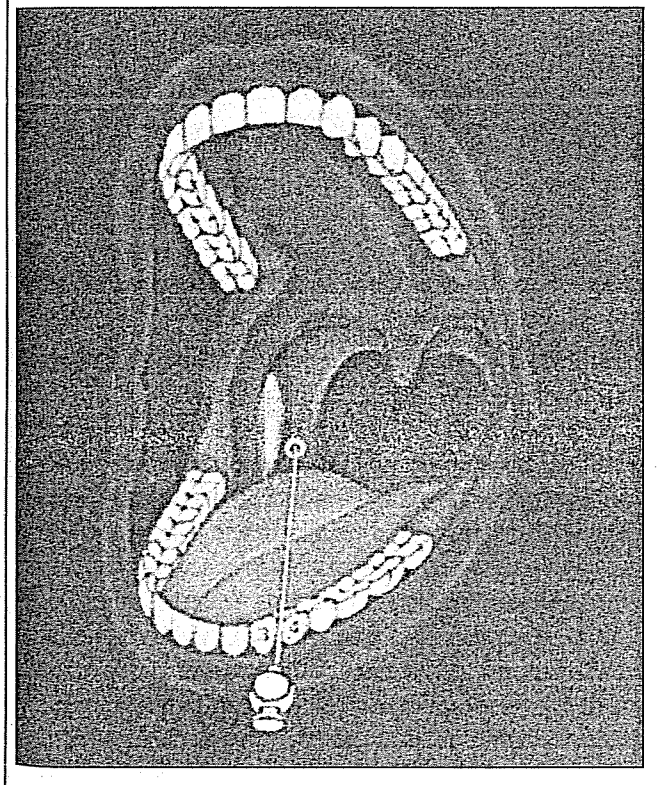


Fig. 3.71 **Injection to the upper cervical ganglion (according to Goebel).** Drawing of the paratonsillar injection site in the posterior pharyngeal arch.

The patient sits in a chair with a headrest against which they lean their head firmly. They need to open their mouth wide for good visibility.

Gagging and pain upon injection can be lessened and the mucous membranes disinfected through mucous membrane anesthesia with Gingicaine or Xylestesin spray. The patient needs to hold their breath while the spray is applied.

After the spray has started acting, the 80 mm needle is inserted from the opposite corner of the mouth (approximately canine or first premolar of the lower jaw), i.e., from the left corner of the mouth when injecting the right side. Generally, the point of injection is located 5 mm medially to the (middle) edge of the tonsil or the tonsillectomy scar in the posterior arch of the palate (palato-pharyngeal arch) (Fig. 3.**71**). The direction of insertion follows the line from the corner of the mouth to the insertion point. After inserting the needle in this direction and advancing it 20 mm laterally and parallel to the horizontal line, its tip meets the body of the second cervical vertebra. The needle is retracted 1 mm. Now the first aspiration takes place and after the syringe is turned 180°, the second aspiration takes place. This ensures that the tip of the needle is indeed placed extravasally and not pseudo-extravasally after aspiration of the intima. Now a test injection of only 0.2 mL is performed. If the patient does not report any sensation, 2 mL of a 1 % procaine solution (or 0.5–1 % lidocaine) are injected. If blood was aspirated, the needle needs to be removed immediately and nothing should be injected on that day. With the technique described above, an inadvertent injection through the intervertebral foramen into the dural space is not possible. The

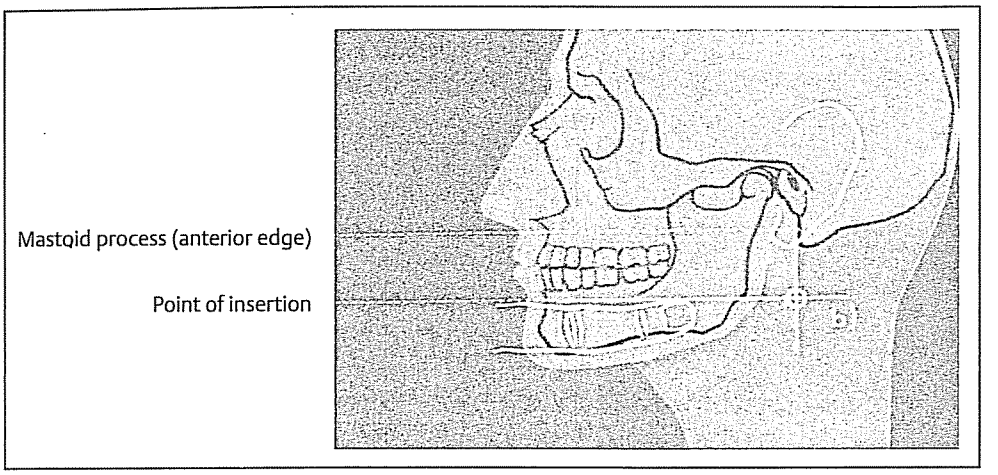


Fig. 3.72 **Injection to the upper cervical ganglion.** The injection site is located at the intersection of two lines: a vertical line downward from the anterior edge of the mastoid process and a horizontal line one fingers' breadth cranially to the jaw line (technique according to Orsoni).

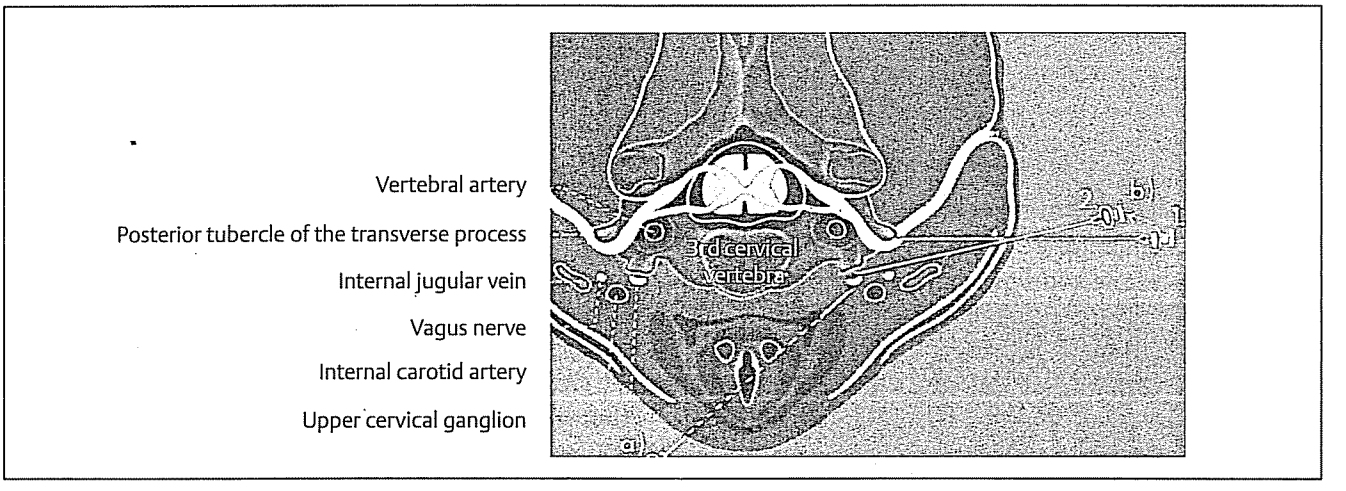


Fig. 3.73 **Injection to the upper cervical ganglion.**
a) Following Goebel's technique, coming diagonally from the front, the needle travels perorally through the posterior pharyngeal wall, and ends behind the internal carotid artery.
b) Following Orsoni's technique, the needle travels first from the point of insertion (1) toward the opposite mastoid until it reaches the tip of the posterior tubercle of the third vertebral transverse process. From there (2) it needs to be advanced another 10 mm ventrally, in front of the transverse process. Injection after aspirations tests in two directions.

anesthesia should be performed only unilaterally in 1 day. If both sides have to be injected, the first anesthesia has to subside (procaine 20–30 minutes, lidocaine 1–3 hours!) before the second one can be done.

Differing from Goebels's technique (Figs. 3.**70**, 3.**71**, 3.**73**), R. Wander recommends moving the point of insertion medially to gain distance to the vagus nerve and avoid complications. The vertebral bodies of C2 and C3 are only 20 mm wide.

Our target area is located only 10 mm lateral to the midline. Wander inserts the needle 10 mm lateral to the midline and slides along the circumference of the vertebral body until he reaches the transverse process. After negative aspiration, he injects into the arch between vertebral body and transverse process (personal information).

b. If we follow Orsoni's technique, we enter at the point of intersection of two auxiliary lines: a vertical line is drawn from the anterior edge of the mastoid process downward, the horizontal a fingers' breadth above the mandibular angle. The 60–80 mm-long short-beveled needle is introduced at this point, at right angles to the surface of the skin, in the direction of the contralateral mastoid and, depending on the thickness of the soft tissue, will make bone contact at a depth of 30–40 mm. We are now at the tip of the posterior tubercle of the lateral process of the third cervical vertebra. The point of the needle is withdrawn slightly and advanced ventrally another 10 mm to a point in front of the lateral process.

The technique is similar to that used for the injection to the stellate ganglion. The upper cervical ganglion lies close to the vertebra in front of the lateral process of the second and third cervical vertebrae, and the middle cervical ganglion is in front of the fourth cervical vertebra.

Dura and spinal cord cannot be injured through the lateral injection because the intervertebral foramina are located anteriorly. The only risk is an inadvertent injection into the carotid and vertebral arteries that are located close by. This can be avoided through aspirating on two levels (with a 180° turn) and continuous aspiration control whenever the position of the point of the needle or of the patient (Fig. 3.**2**) is changed. Orsoni infiltrates this area with 10–20 mL. In our view, a smaller quantity (2–5 mL) will achieve the same therapeutic effect whilst reducing the risk of a carotid-sinus reflex.

c. Another technique from the side enters slightly further in a caudal direction: the patient turns their head to the side and stretches it back. The entry point is exactly halfway between the lateral edge of the greater horn of the hyoid bone and the lower edge of the mastoid at the level of the angle of the jaw. The needle is guided in a slightly medial-cranial direction as far as the anterior edge of the cervical vertebra. After bone contact it is withdrawn about 1 mm and the injection given after a negative aspiration test.

Side-effects The patient needs to be prepared for side-effects that may occur while the most superior cervical ganglion is blocked through the effects of the anesthesia. Generally, a few minutes after the injection, Horner syndrome will be produced. If the injection was placed correctly and the Horner syndrome does not or only lightly occurs, severe regulation impairment can be concluded. This can be adjusted through additional injections. Increasing signs of Horner syndrome indicate improvement. When injecting procaine there will be a sensation of lightness in the head for about 20–30 minutes (when using lidocaine 1–3 hours). This is replaced by a sensation of warmth. Slightly impaired vision, heaviness of the eyelids, slight dizziness when walking, the sensation of a lump in the throat, and difficulty in swallowing, possibly even to the extent of a loss of voice (recurrent-nerve anesthesia) may be experienced. Occasionally a slight headache, lasting a day, is felt following treatment. The pulse is a little more rapid, the venous blood has been shown to become arterial in character, and the blood pressure temporarily increases by 20–30 mm (up to a maximum of +50 mm Hg). The blood calcium level also rises and sugar metabolism is increased.

If treating a bilateral condition, up to 10 infiltrations may be necessary for a series of these injections, given alternately left and right three times a week. In stubborn conditions (e. g., with regulatory rigor following cortisone treatment) more series might be required. In addition, it is also advisable to look for a potential interference field. After the fourth or fifth treatment and for up to a fortnight after the final injection, the patient tends to feel sleepy and needs rather more sleep, but their fitness for work will not be impaired. This is to be regarded as a favorable sign and gives way to balanced relaxation, and may on occasion even reach a state of euphoria.

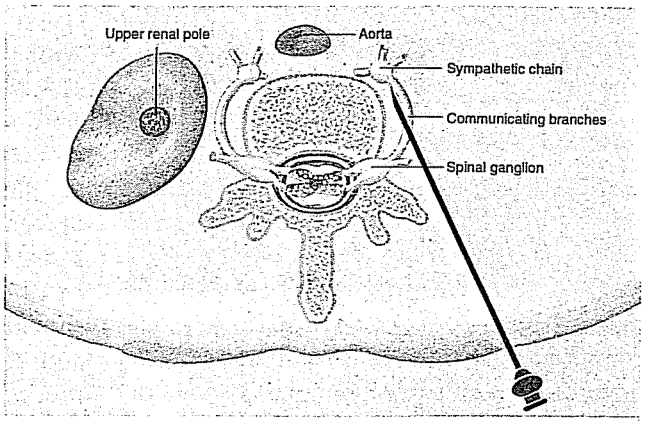


Fig. 3.**74** Topography and position of needle in the injection directly to the sympathetic chain.

Statistics In a group of 750 asthmatics and 81 other patients suffering from allergic disorders, Descomps achieved a 90 % rate of cures or substantial improvements, which were maintained for at least 3 months, in 50 % the success of the treatment was maintained for anything from 2–20 years. Twenty-five thousand of these injections were carried out without any lasting ill effects!

d. We reach the middle cervical ganglion by entering at about the level of the annular cartilage, in order to arrive at the front of the lateral process of the fourth cervical vertebra. We push the sternocleidomastoid muscle and the vessels aside with the fingers of the left hand, aspirate and infiltrate as described above, but with only 2–5 mL of our neural-therapeutic preparation, when we are certain that we are outside any vessel. (See Fig. 3.**74**.)

1c. Injection to the Lumbar Sympathetic Chain**

Alternative terminology Lumbar "block," lumbar sympathetic "block."

Anatomy Anesthesia of the lumbar sympathetic chain ganglia affects all sympathetic fibers supplying the lower extremities. The pre-ganglionic fibers originate at T12 through L2 and run through the anterior root of the spinal cord and white communicating branches to the sympathetic chain. From here, most post-ganglionic fibers pass as lumbar splanchnic nerves to the abdominal aortic plexus. Hence, the fibers of the leg travel in the plexus of the common and external iliac artery until they branch off around the femoral and popliteal arteries. As hypogastric plexus (presacral plexus) the fibers of the

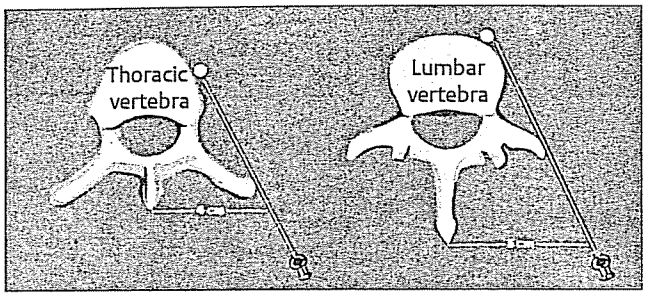


Fig. 3.**75** Position of the sympathetic chain in the thoracic and lumbar area.

pelvic viscera continue the direction of the abdominal aortic plexus.

Indications All chronic circulatory disturbances of the lower extremities, irrespective of their origin, form the classic domain for injections to the lumbar sympathetic chain, such as arterial occlusive disorders with possible gangrene formation, conditions resulting from burns, frostbite, varicose ulcers, ulcerating scars, ulcers due to x-rays or bedsores, causalgia, slow-healing amputation stumps, amputation-stump neuralgia, phantom-limb pains, hyperhidrosis, painful stiffness in the joints, post-traumatic osteoporosis, Sudeck dystrophy; in vascular spasm for opening a collateral circulation. Further indications are venous insufficiency with acute or chronic thrombophlebitis and post-phlebitic edema, embolism; in impotence, for improved blood supply to the genital organs. The injections are also worth trying in spinal motor paresis.

When the technique is used correctly, the patient reports a sensation of warmth in the leg on the side of the injection, and this can also be felt objectively. In addition to effecting an improvement in the arterial blood supply, we also achieve an interruption of the sympathetic pain-transmission channels that is maintained well beyond the limited duration of the anesthetic effect.

Injection to L3 in Post-sciatic Circulatory Disturbances

Reischauer found that 26% of patients who had suffered from L5 intervertebral-disk sciatica, one of those that occur most frequently, also had "post-sciatic circulatory disturbances." These are characterized by sciatica-type pain in the sacrum and the outer and flexor sides of the thigh, and dysbasia (intermittent claudication) with poor circulation in the lower extremity. There are no compression symptoms (pain is exacerbated when the patient sneezes or coughs), the vertebral column is mobile, the spinous processes are not percussion-sensitive and arteriographic findings are negative. The patient's history includes references to lumbago and sciatica.

The only recommended treatment consists of repeated injections of procaine or lidocaine to the lumbar sympathetic chain at L3. The radiating pain reminiscent of sciatica, dysbasia, and the circulatory disturbances disappear immediately following the injection. The latter, of course, are not due to any organic damage to the vascular wall but a sympathetic irritation caused by compression of L5, which maintains spastic vasoconstriction in the capillary terminal reticulum. This can be eliminated only by this therapy. Treatment should initially be repeated at intervals of 1 or 2 days, and at ever-increasing intervals as the condition improves. If these injections fail to provide relief, several → (T) peridural anesthetics should be administered in hospital. These are even more effective.

Materials 1 mm × 100–120 mm-long needle.

Quantity 2–5 mL.

Technique The standing patient places their hands on a table and bends over. The line of the iliac crest is drawn on their back, and at right angles to this the line of the spinous processes. The line connecting the two iliac crests marks the spinous process of the fourth lumbar vertebra. From this we can count off the required level. The needle is inserted three finger breadths laterally from the line of the spinous processes, or at L3 three finger breadths above the line of the iliac crest. In the lumbar region, the upper edge of the spinous process corresponds approximately to the lower edge of the lateral process. When the 100–120 mm-long needle is advanced at a convergent angle of about 25° to the median plane, it makes bone contact at a depth of about 30 mm and has reached the lateral process. In that event, the needle position has to be corrected to bypass this. The needle is then advanced by infiltrating under constant plunger pressure and reaches the lateral surface of the vertebral body at a depth of 80–90 mm (50 mm from the lateral process). The point of the needle is now moved carefully past this until contact is just lost with the convex surface of the vertebra. It is then immediately adjacent to the sympathetic chain. Following negative aspiration we set a depot here of 2–5 mL (see Figs. 3.**74**, 3.**59**).

1d. Injection to the Thoracic and Sacral Sympathetic Chain*

Indications, technique, and materials See the section on injection to the lumbar sympathetic chain above.

The Russian school (Vishnevski et al.) has shown us that the thrust into the system with a procaine or lidocaine injection directly to the sympathetic chain is perfectly capable of producing a reaction at even a very remote site. Thus, it is not of major importance to the therapeutic processes at what level and on which side we inject to the sympathetic chain!

As a rule, we use the injection to the → (T) stellate ganglion for the region comprising the head, neck, throat, chest, and arms, and that to the upper renal pole for the abdomen. For the lower extremities, in addition to the injection to the lumbar sympathetic chain, we prefer to use those to the root of the → (T) sciatic nerve and → (T) epidural or → (T) presacral infiltrations.

Incidentally, it is worth remembering that the thoracic sympathetic chain is located more on the lateral surface of the thoracic vertebrae, whilst the lumbar sympathetic chain lies further on the anterolateral surface. See Figure 3.**75**.

Warning! We have to caution against injections to the thoracic sympathetic chain ganglia because they are prone to complications. In this area, an involuntary subdural injection causes life-threatening complications!

The pelvic part of the sympathetic chain contains three to four sacral ganglia and, at the caudal end, the solitary ganglion impar. In this ganglion, both sympathetic chains come together in an arch-like shape. We inject to this ganglion when we treat → coccygodynia. The ganglion is located in front of the coccyx. To reach the ventral side of the coccyx, we need a bent needle. Before removing it from its packaging, we bend the 60 mm disposable cannula into a semi-circle.

1e. Possible Mistakes and Complications with Injections to the Sympathetic Chain

Outdated statistics may create the impression that injections to the sympathetic chain and its ganglia are full of risk for both doctor and patient. Out of 10 000 stellate-ganglion anesthetics, Luzuy reported only a single fatality (in bronchial asthma with marginal decompensation). Leriche wrote:

> The risks of injections to the stellate ganglion have often been exaggerated; even sudden death has been reported. Personally, in several thousand stellate blocks, I have observed nothing of the kind. I attach a certain amount of importance to the psychological state of the patient. It is an important part of our duties to reassure him and not to awaken in him the impression of a difficult and dangerous act on our part. Further, one must be completely familiar with the technique.

A survey made amongst neural therapists with an average of 20 years' experience showed that in 1.75 million anesthetics to the sympathetic chain and its ganglia we had not a single case of irreversible damage as a result of our therapy, much less a fatality. These included about 500 000 (estimated) injections to the stellate ganglion. In these, there were 12 (1 in 41 667) accidental intra-arterial injections, which produced brief convulsions with loss of consciousness, all of which were without sequelae and required no further treatment. One colleague admitted that he had completely omitted to aspirate before the injection. The method can hardly be blamed for such gross negligence. On 20 occasions (1 in 25 000), there was a pneumothorax. These healed within a few days, some of them under the supervision of a specialist, the rest with only minor symptoms and without treatment. In about 500 000 injections to the upper renal pole, there were 25 cases of macroscopic hematuria and one renal colic. Three cases of severe after-bleeding were referred to hospital as a precaution, but all patients were able to be discharged 2 or 3 days later.

Only on one occasion was there a massive retroperitoneal hemorrhage, which called for lengthy hospital treatment but also resulted in no permanent damage. This patient suffered from a previously unrecognized coagulation defect. Our figures are not statistics; they merely provide a general view. As far as I know, there has not been a single fatality attributable to the method in over 65 years of neural therapy. If the technique is used in accordance with the rules, and if the physician has an adequate mental picture of the topography and reasonably sensitive fingertips, complications can be easily avoided.

Nevertheless, no matter how well things may have gone on so many occasions, these injections must never become a light-hearted routine matter. We must concentrate fully on what we are doing whenever we administer them to our patients and proceed in a thoroughly responsible manner. Only if we do this, will nothing happen. Every medical intervention harbors a certain element of risk, and it is essential to know what it is in order to reduce it to its absolute minimum.

Caution: If the prothrombin value (Marcumar) is below 45 % (–70 %), do not give any injection to the sympathetic chain!

1f. Possible Mistakes and Complications with Injections in the Region of Neck and Chest

If a local anesthetic is injected into a vessel leading to the brain, a toxic convulsion effect can be produced, which may be fatal when substantial quantities are injected, although this would seem to be contradicted by recent reports on therapeutic procaine injections into the → (T) carotid artery. Despite this, it is best to avoid injections into any vessels that lead to the brain. Thus we must always aspirate, preferably twice and in opposite directions, before any injection and whenever we change the position of the needle or if the patient has moved (coughing, swallowing, etc.). No blood must be aspirated. It is preferable to check 10 times too often than miss once, and to inject only when one is certain that the needle is lying extravasally. We can be certain that it is correctly sited only if there is no

reaction when we give the patient a preliminary injection of a few tenths of a milliliter.

Particularly when there is an occlusion or considerable narrowing of the internal carotid artery, blood might reach one of these vessels indirectly. In rare cases, existing anastomoses can cause retrograde blood flow into the skull. There is a greater chance for this to happen if large amounts of fluid are injected quickly with high plunger pressure! In the area of the head and the face, the number of vascular anastomoses is rather large. Anastomosis can take place, for example, in the area of the nose, between the terminal branches of the internal carotid artery, such as the ophthalmic artery, and the terminal branches of the external carotid artery. In the circle of Willis, the internal carotid artery and the vertebral artery form anastomoses at the base of the midbrain. As a result: we never inject larger amounts bolus-like, but, particularly in the area of the head, slowly and cautiously. With a little experience it is easy enough to acquire the proper "feel."

Incidents occurring with injections in the cervical region need not, however, necessarily be due to an accidental intravasal or intradural injection. The cervical region is a great deal more sensitive than any other part of the body. Especially in the hyperergic form of reaction encountered amongst autonomically severely disturbed patients, the carotid-sinus reflex can lead to unpleasant shock reactions with loss of consciousness and tonic-clonic twitching. Such incidents are exceedingly rare, but they can be fatal if the amount injected is excessive. Fortunately, they generally pass off without treatment. It has been stated that such a state of shock can be arrested by the intravenous administration of soluble corticosteroid preparations (e.g., Solu-Decortin H). Instead of 15–25 mL, we use only 2–5 mL without the addition of vasoconstrictors, which increase the toxicity of the local anesthetic by a factor of 10. By pressing in with the fingers (Dosch method) we avoid injury to vessels and the apex of the lung.

According to Koster and Kasman, the frequently voiced concerns about damage through ascending procaine to the medullary centers resulting from unintentional sub- or intradural injection are unfounded! Even during complete anesthesia of the upper extremities and the head, the amounts and concentrations required for spinal anesthesia never affect the respiratory center. The authors concluded that the respiratory center possesses properties that make it insensitive to procaine. However, one ascertains by aspiration before injection that the needle is not lying intradurally. Because paravertebral injections and injections to the sympathetic chain in the thoracic area are prone to complications, we prefer to replace them with anesthesia of the stellate ganglion.

Occasionally, when the anatomical conditions are unfavorable, the dural sheath may extend as far as the intervertebral foramina. In these extremely rare cases, one need not penetrate into the foramina in order to place the needle intradurally. If this happens due to inattention or if an injection is made into the spinal cord, irreversible damage, even death, may occur. When injecting to the stellate ganglion, this can be prevented not only by aspiration in two directions but also by using a short needle and maintaining constant bone contact with the head of the first rib or the carotid tubercle of the sixth cervical vertebra.

In cases where hypotonic patients have been given procaine injections, a dangerously reduced blood pressure has been observed, which has been due to peripheral vasomotor paralysis and damage to the nerve centers. With procaine and the extremely small quantities we use, there is little risk of this. Larger quantities can produce a carotid-sinus reflex. Nor should the pressure exerted with the fingers to move aside the bundle of vessels and nerves be too brusque or maintained for too long. I have had personal experience of this reflex in three autonomically labile patients, including a perforation of the carotid artery (but without injecting into it): nausea, blackness, and a spinning sensation in front of the eyes, throbbing in the head, and buzzing in the ears, pallor, and dilated pupils. These symptoms passed off without further treatment after lying the patient flat for a few minutes. If there is a more severe reaction, none of which I have ever experienced personally, although I have given countless injections into this area, the intravenous administration of a cortisone preparation (e.g., Solu-Decortin H) would be indicated.

Setting a pneumothorax by perforating the apex of the pleura. This complication can be avoided by pressing the palpating finger into the carotid tubercle of the transverse process of the sixth cervical vertebra, injecting while maintaining loose bone contact (Dosch) and inserting the needle in full expiration. Often enough the patient does not even notice that he or she has a pneumothorax, and it will heal by itself with no further treatment, without affecting the patient's general condition to any extent; at worst it may require 2 or 3 days in bed or perhaps reduced activity. A tension pneumothorax is hardly likely. Should it occur, it would present with symptoms of chest pains, an irritable cough, a sensation of constriction, shortness of breath, and blood in the sputum. In addition to the administration of sedatives, the patient should be referred to hospital for in-patient treatment (paracentesis, decompression).

As a reminder: when tuberculosis reached its peak, before the introduction of chemotherapeutics, the affected lung was immobilized through artificial pneumothorax for therapeutic reasons, mainly in cavernous processes. Today, the lungs are punctured with a 1 mm cannula during transthoracic needle biopsy. The tissue sample is cyto-diagnostically examined. In 4.4 % of these biopsies pneumothorax occurs. Kelch and Morawetz consider this a "low complication rate." Every tenth induced pneumothorax requires thorax drainage.

- Hoarseness or loss of voice following injections in the cervical region. The injection has been given too far medially, and the recurrent nerve has been anesthetized. This is harmless and passes off quickly. The same also applies to anesthesia of the phrenic nerve, which temporarily stops movement of the diaphragm. Care is therefore recommended if injections are given bilaterally.
- If the injection is accidentally given into the vertebral artery (and this is easily avoided by prior aspiration!), the patient will temporarily have tinnitus and/or flashing in front of the eye on the side of the injection. This, too, passes off quite rapidly and does not call for treatment.

2. Parasympathetic Ganglia of the Head

2a. Injection to the Ciliary Ganglion**

Alternative terminology Retrobulbar infiltration, ciliary anesthesia.

Anatomy The ciliary ganglion has a length of 2–3 mm. It is not always found in the same position in every patient. Its location is about 10–20 mm behind the eyeball (which has a diameter of about 24 mm), generally directly laterally of the optic nerve and medially of the origin of the lateral rectus muscle of the eye. Directly behind the ganglion, the ophthalmic artery comes from a lateral direction to turn around the optic nerve and continues above it. This ganglion receives sensory fibers from the nasociliary nerve, parasympathetic fibers from the oculomotor nerve, and sympathetic fibers from the upper cervical ganglion, via the internal carotid plexus and the ophthalmic plexus. The fibers of the ciliary ganglion run to the eyeball and supply the vessels of the choroid and sclera, and some of their branches run to the ciliary muscle, the sphincter, and dilator muscles of the pupil and to the iris and cornea. The ciliary body produces intraocular fluid, which nourishes large parts of the eye, including the external layers of the retina. The intraocular pressure depends on the balance between production and drainage of this fluid. This regulation is based on sensible information coming from ganglion cells that are located in the ciliary body.

Indications

1. *Segmental therapy:* All acute inflammatory and chronic eye disorders, e.g., neuritis of the optic nerve, scleritis, keratitis, iritis, iridocyclitis, retinal periphlebitis with vitreous hemorrhage, rheumatic–allergic reactions and post-traumatic dysfunctions, glaucoma (except for hydrophthalmia), venous thrombosis of the retina. In addition, for cases of the following, where simpler injections (intravenous, quaddles, nerve-exit points) have failed to produce results: conjunctivitis, ophthalmic herpes zoster, all forms of corneal disorders, disorders of the retina (except detachment), incipient cataract, certain forms of headache and recalcitrant neuralgia in the region of the eye.

   Apart from eliminating the inflammation and reducing pressure on the eye by regulating the autonomic state, both of which are of great importance, we are also able to improve the blood supply to the optic nerve, retina, and the anterior parts of the eye.
2. *Interference-field search:* As test injection, if the patient's history suggests the presence of an interference field in the region of the eye, e.g., due to eye injury, eye surgery, persistent or repeated inflammatory conditions.

Materials There is no need for a specially curved needle, a straight one 35 mm to a maximum of 40 mm in length will do. If it is 40 mm long, it must not be inserted all the way! Ophthalmologists use a special straight 35 mm needle available commercially, with a slightly rounded tip.

Quantity 1.5 mL procaine solution, e.g., 1 % Novocaine for therapeutic use made by Hoechst Pharmaceuticals. The more recently developed local anesthetics based on amides are less suitable for this injection, at least for outpatient treatment in a general prac-

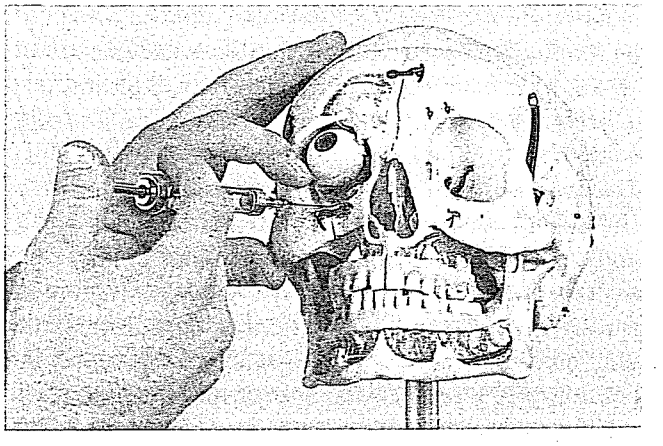


Fig. 3.76 **Injection to the ciliary ganglion.** Orientation on the bony skull.



Fig. 3.77 Injection to the ciliary ganglion.

tice, because they have a longer-lasting anesthetic action.

Technique The seated patient has the back of their head supported by a neck support or by an assistant who holds it firmly in position, or they lean it against a wall. They hold their eyes open and look slightly upward and medially. This causes the inferior oblique muscle to be tensed so that the needle can be guided through below it. The physician carefully pushes the tip of his or her forefinger into the lower lid in such a way that the eyeball is pushed away upward and toward the nose. The needle is inserted in the outer lower corner of the eye socket through the skin of the lower lid, i.e., at about the 7-o'clock position for the right eye, and at about the 5-o'clock position for the left eye. (See Figs. 3.**76**, 3.**77**.)

We best avoid injury to the eye by first inserting the needle and guiding it approximately parallel to the lower orbital wall and sagitally to a depth of about 20 mm. In order to push any vessels out of the way, we always maintain slight pressure on the plunger as we proceed. We then advance the needle another 10–15 mm whilst raising it slightly back up and inward toward the orbital foramen where the optic nerve enters. The point of the needle now lies in the retrobulbar space within Tenon's capsule (fascia of the bulb of the eye), immediately in front of the ciliary ganglion. This will do; there is no need to pass into the ganglion itself.

The distance from the entry point to the site of our injection is 35 mm. Thus, the 40 mm-long needle must not be inserted all the way, or there will be a risk of injury to the ophthalmic artery.

During the injection, the patient should avoid moving his or her eyes, as this would increase the risk of injury to a vessel. After short aspiration, the remaining amount of about 0.7 mL of procaine solution is injected quickly. This is quite simple and not dangerous if the correct technique is used! The general practitioner will rapidly lose his or her first misgivings about this slightly unusual injection. All that can happen (apart from an exophthalmus, which, however, in view of the small quantity of local anesthetic used, will be brief) is a retrobulbar hematoma.

According to Piotrovski, with the correct technique, a hematoma may occur on average once in 80 injections. This is almost always a relatively harmless venous hemorrhage, which shows within the first 5 minutes and stops by itself by autocompression. It then acts like an additional → (T) autohemotherapeutic treatment. It is, however, advisable to tell the patient casually beforehand that this might happen, i.e., that if he or she is unlucky he or she may get a black eye following this important injection. The visual disturbance that follows is caused firstly by dilation of the pupil and secondly by an outward squint (due to the temporary paralysis of the muscles of the eye). When procaine is used, this will disappear in 30 minutes without any negative sequel, whilst it will persist for 2 hours or more after Xylocaine.

In the relevant literature, incidents have been described in which, following a retrobulbar injection (mostly when the needle has been inserted further than 35 mm!), arterial hemorrhages are said to have occurred, with the orbit completely filled, severe bulbar protrusion, and the risk of occlusion of the retinal vessels. Such cases would have to be treated by an eye specialist. According to Killian, by using the technique just described, these complications can largely be avoided.

Cases of generally temporary blindness following local anesthesia with adrenalin additives (such as are customary in eye surgery) have also been reported (Doden). This is therefore the appropriate place to warn yet again against using anesthetics with vasoconstrictor additives in neural therapy! No case has come to my knowledge of permanent damage to the eye resulting from neural-therapeutic ciliary anesthesia.

In some cases it can be useful to combine injections to the ciliary and the pterygopalatine ganglion because the latter supplies the eyeball and its auxiliary organs with autonomic fibers as well. Anyone who is concerned to provide relief to sufferers from disorders of the eye must learn to give this injection and to use it frequently!

2b. Injection to the Gasserian (Otic) Ganglion and Mandibular Nerve*

Alternative terminology Injection to the oval foramen, injection to the root of the third branch of the trigeminal nerve, injection to the Gasserian (otic) ganglion. With this injection we do not in fact reach the Gasserian (otic) ganglion itself, since this lies intra-

cranially. To be precise, we only inject into the mandibular nerve, the largest of the three branches, immediately after it leaves the oval foramen.

Anatomy After leaving the skull through the oval foramen, the mandibular nerve divides into several branches. The strongest branch is the inferior alveolar nerve that supplies the teeth of the lower jaw and continues as the mental nerve to the lower lip and the chin. Another main branch is the auriculotemporal nerve. The lingual and buccal nerves supply the mucous membranes. The motor branch supplies the mylohyoid muscle and the muscles used for mastication including temporalis, masseter, lateral, and medial pterygoid muscle. The branch that supplies the latter is located most medially and supplies the tensor tympani and veli palatini muscles. At this nerve branch lies the parasympathetic Gasserian (otic) ganglion. It supplies the parotid gland and the buccal glands and receives its pre-ganglionic fibers from the vagus nerve. We also anesthetize this ganglion whenever we inject to the mandibular nerve. Indications: → ear.

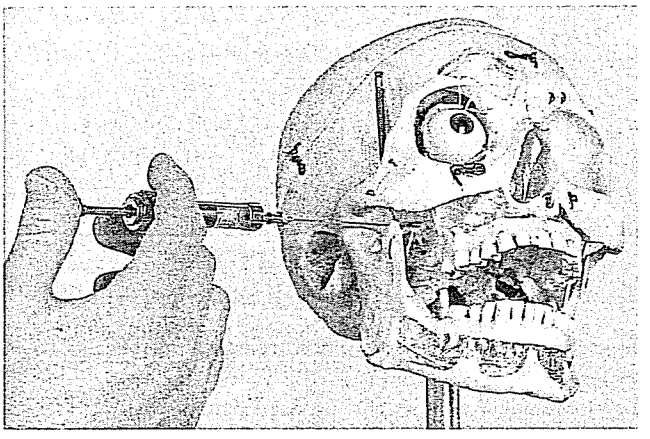


Fig. 3.78 **Injection to the oval foramen (Gasserian [otic] ganglion).** The patient holds his or her mouth half open. The needle is inserted below the center of the zygomatic arch above the mandibular notch and is then advanced to the center of the base of the skull to a depth of 40–50 mm.



Fig. 3.79 **Injection to the oval foramen (Gasserian [otic] ganglion).** Orientation on the bony skull. The point of the needle lies in front of the separation of the mandibular nerve into its two branches.

Indications Trigeminal neuralgia, if injections to the → (T) nerve-exit points have failed to produce the desired results; trismus, pain due to malignancy in the area supplied by this nerve; also worth trying with headaches of uncertain origin.

Materials 0.8 mm diameter × 60 mm needle.

Quantity 1–2 mL.

Technique The seated patient leans with the back of his or her head against the head rest and opens and closes his or her mouth several times, to enable the doctor to palpate the mandibular notch directly below the center of the zygomatic arch. The dimple formed as a result below the cheekbone and above the notch is the entry site for our injection. It is about 30 mm in front of the tragus. The patient should now keep the mouth half open. The needle is inserted a short distance and is then guided transversally (on the opposite side) along the base toward the middle of the base of the skull. At a depth of about 40 mm the needle meets the pterygoid process. The depth reached by the needle is noted; it is then withdrawn slightly and guided carefully about 5–10 mm further in a dorsal direction. At a depth of 50 mm we are now near the oval foramen (see Figs. 3.**78**, 3.**79**), and after prior aspiration the procaine is deposited here (beware of blood!). The patient's pain reaction shows when the mandibular nerve has been reached. Paresthesia occurring in the region supplied by this nerve indicates that the needle has been sited correctly.

2c. Injection to the Pterygopalatine Ganglion and the Maxillary Nerve**

Anatomy:

- The parasympathetic pterygopalatine ganglion is located in the pterygopalatine fossa, directly below the maxillar nerve. The ganglion has three roots: the parasympathetic major petrosal nerve that originates in the facial nerve, the sympathetic petrosus profundus nerve that originates in the carotid plexus (which also provides a connection to the ciliary ganglion), and the sensory pterygopalatine nerves that originate in the maxillary nerve. Postganglionic fibers run with branches of the maxillary nerve to glands that are located in the mucous membrane of the palate, nasal cavity, and paranasal sinuses. After traveling along a complicated pathway, they reach the lacrimal gland.
- The maxillary nerve carries only sensory trigeminus fibers. It supplies the dura mater, the skin of the lower eyelid, the cheek, the upper lip, and the outside of the nose, as well as the teeth and gum of the

upper jaw. After branching off the trigeminal Gasserian (otic) ganglion, it enters the pterygopalatine fossa through the foramen rotundum. Here, it divides itself into its three main branches: pterygopalatine nerves, infraorbital, and zygomatic nerve.

Indications Hay fever, vasomotor rhinitis, dacryorrhea, photophobia, facial pains, disorders and paresthesia of the oral mucosa. Try also in cases of therapy-resistant forms of headache, other results of skull fractures, and maxillary "toothache" in the absence of pathological dental findings. Trigeminal neuralgia, especially where the second branch is affected. Neuralgia of the pterygopalatine ganglion with pain at the interior angle of the eye, the root of the nose, in the nose, in the upper jaw and palate accompanied by attacks of sneezing.

For hay fever, it will normally be sufficient to give this injection three times at a few days' intervals at the start of the pollen season. In vasomotor rhinitis a greater number of injections will normally be required (whenever the symptoms recur).

Materials 0.8 mm diameter × (pterygopalatine ganglion) 40 mm or (maxillary nerve) 60–80 mm-long needle.

Quantity 1–2 mL.

Technique Orientation on the bony skull is essential before the first injection!

a. The simplest and safest route for the injection to the pterygopalatine ganglion is from the mouth through the greater palatine foramen. This is located medially from the posterior edge of the second upper molar between the alveolar process and the roof of the palate. The site can be found easily by palpating with a round-ended probe and locating the depression under the mucosa. A quaddle is first set in the mucosa and the 40 mm-long needle is then passed through this along the pterygopalatine canal at an angle of about 60° obliquely in a cranial and dorsal direction, i.e., backward and up. At a depth of about 30 mm the needle is directly next to the pterygopalatine ganglion, where we inject 1–2 mL of procaine solution. The stem of the maxillary nerve is also included, since this is only a few millimeters distant (see Fig. 3.**46**). Insertion of the needle deeper than 35 mm has to be avoided, because it could end in the orbital cavity and from there through the upper orbital fissure in the middle cranial fossa. Before injecting, we aspirate, because the descending palatine artery runs through this canal as well.

A glance at the bony skull will show that this injection cannot create any technical difficulty. What is more, it is absolutely without risk. If the bitter liquid used for the injection into the nasopalatine region runs down, the needle is not lying in the required position in the canal but is too far back and has passed through the soft palate.

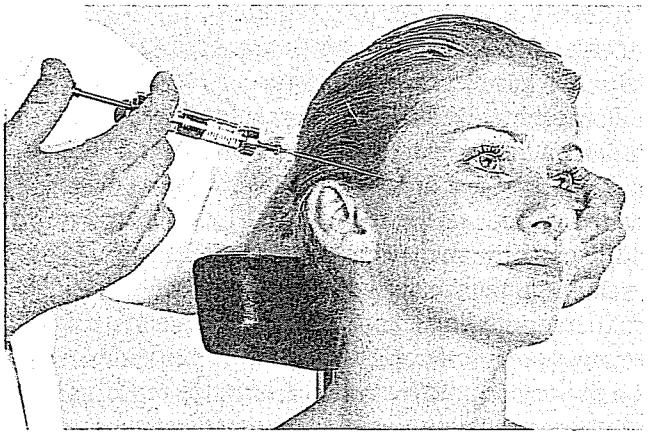


Fig. 3.**80** **Injection (b) to the pterygopalatine ganglion.** Orientation on the bony skull.

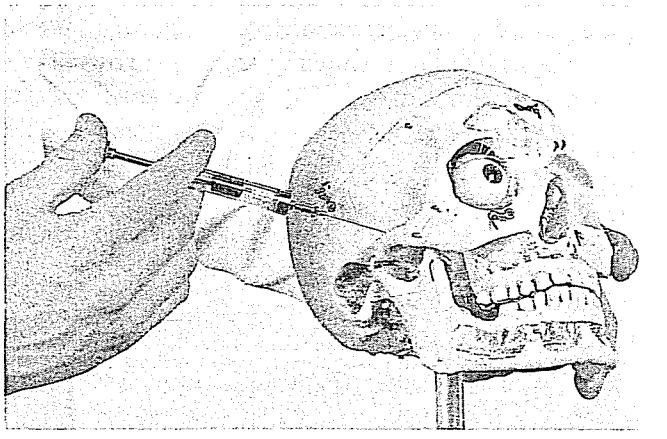


Fig. 3.**81** **Injection (b) to the pterygopalatine ganglion.** The needle is inserted above the center of the zygomatic arch, then advanced obliquely toward the pterygopalatine fossa, which lies at a depth of about 60 mm.

b. The seated patient leans their head against a headrest. The point of entry is on the upper edge of the zygomatic arch, about midway between the edge of the orbital rim and the ear lobe (see Figs. 3.**80**, 3.**81**). The needle is guided in obliquely down toward the front, until it falls into the pterygopalatine fossa at a depth of about 50–60 mm. If the angle of the needle is correct, it will point toward the zygomatic bone on the other side of the skull. When bone contact is obtained, the needle is withdrawn about 1 mm. After aspiration to ascertain that no blood is being drawn into the syringe, 1–2 mL procaine is now injected. The injection is given alternately left and right and, in severe cases, on both sides in a single session. Paresthesia in the region of the side of the nose and upper lip indicates the correct location of the needle. As a sequel of this

injection, a harmless hematoma may occasionally occur, which will cause the cheek to become swollen into a "hamster cheek." If this is noticed early enough, compression with a hard object is indicated, e.g., a metal spatula. No other treatment for this kind of unintentional autohemotherapeutic transfusion is necessary, although it will cause the patient a certain amount of pain during mastication for a few days, because of pressure on the masseter muscle.

c. Another injection to the maxillary nerve reaches it more peripherally and is often times sufficient:
→ injection to the maxillary tuberosity and the maxillary nerve (listed under [c], injection to the maxillary tuberosity and the maxillary nerve, p. 313).

2d. Injection to the Submandibular Ganglion*

Anatomy The submandibular ganglion is located next to the lingualis nerve where the nerve turns into the buccal cavity. It is connected to the nerve through two bundles. Sensory lingualis and parasympathetic chorda fibers run through the posterior bundle and the sympathetic root is formed by fibers from the plexus of the facial artery. The anterior bundle brings efferent parasympathetic fibers to the lingualis nerve, which includes the glands of the tongue and the submandibular gland. The submandibular gland receives secretory fibers through special branches of the ganglion.

Indications Dry oral mucosa, such as in Sjögren syndrome.

Technique The 20 mm-long needle is inserted between the dorsal border of the wisdom tooth and the tongue. We place a 1 mL submucous deposit. We set another 1 mL after infiltrating another 10 mm. This blocks the lingualis nerve, which supplies the frontal part of the tongue.

3. Injection to the Splanchnic Nerves and the Celiac Ganglion***

Alternative terminology Injection into the renal bed, injection to the renal pole, perirenal or paranephral injection, splanchnic-nerve or celiac-plexus block.

Anatomy The uniform nerve bundle of the major splanchnic nerve (T5 to T6) travels medially and caudally. Combined with the minor splanchnic nerve (T11 to T12) it reaches the abdominal cavity through a fissure in the lumbar part of the diaphragm. Both travel from there to the celiac ganglion. Parts of the larger visceral nerve also run to the suprarenal plexus, parts of the smaller nerve to the renal ganglion. The injection certainly affects other ganglia located in front of or next to the initial part of the abdominal artery, including the aorticorenal ganglia and the mesenteric ganglion. These ganglia that are located on the level of the first lumbar vertebra form the center of the largest autonomic plexus, usually known to laypeople as the solar plexus. From here, all the organs of the upper abdominal area and the small and large intestine up to the left colon bend are regulated sympathetically and parasympathetically, because the vagus nerve joins the plexus as well.

Indications

1. *Segmental therapy:* This injection (see Fig. 3.**82**) is able to coordinate the functions of the digestive tract, including peristaltic, sphincter function, internal and external secretion, resorption etc., in a manner that no drug can accomplish. Thus, the indication list is a long one: all secretory and motor gastric and intestinal disorders, e.g., gastric and duodenal ulcer with hypo- or hyperacidity, the gastrocardial syndrome, flatulence, epigastric pain of all kinds; acute and chronic disorders affecting the liver (except hepatic carcinoma or abscess and echinococcal cysts), gallbladder (except empyema) and pancreas; pylorospasm in infants, congenital dilatation of the colon (Hirschsprung disease), chronic diarrhea and chronic constipation, circulatory

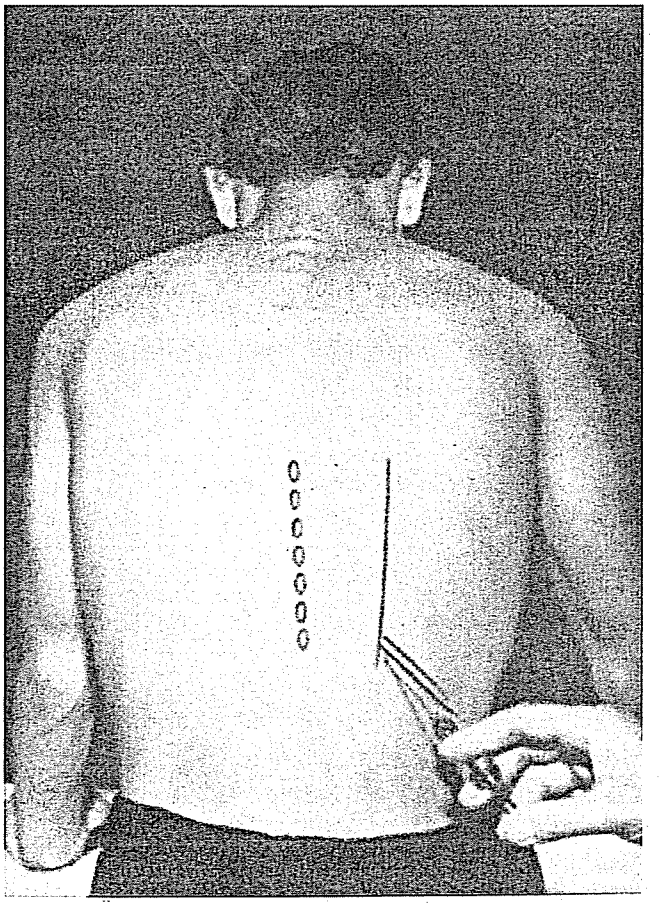


Fig. 3.**82** Injection to the celiac plexus.

disturbances of the kidney such as eclampsia, anuria; as complementary treatment for diseases of the adrenals and insufficencies after long-term corticosteroid treatment. In the case of shock this injection may be life-saving by loosening up vascular spasms in the splanchnic and renal area. Through the celiac ganglion we can activate the spleen—organ for blood regulation and lymphocyte formation—and, as a result, strengthen the immune system. This injection is also worth trying in multiple sclerosis, in conjunction with injections to the → (T) stellate ganglion.

The Russian school uses this injection with a good success rate in intestinal obstruction. About 70 % of patients admitted to hospital with a diagnosis of ileus could be cured by this means without recourse to surgery. This source gives the following further indications: shock resulting from burns, septicemia, suppurative thrombophlebitis of the femoral and iliac veins, senile gangrene, transfusion mishaps, and numerous others.

2. *Interference-field search:* As a test injection, when an interference field is suspected in the liver, gallbladder, gastric, or kidney regions and that may be due, for example, to hepatitis, gallbladder disease, gastric ulcer, pancreatitis, dys-

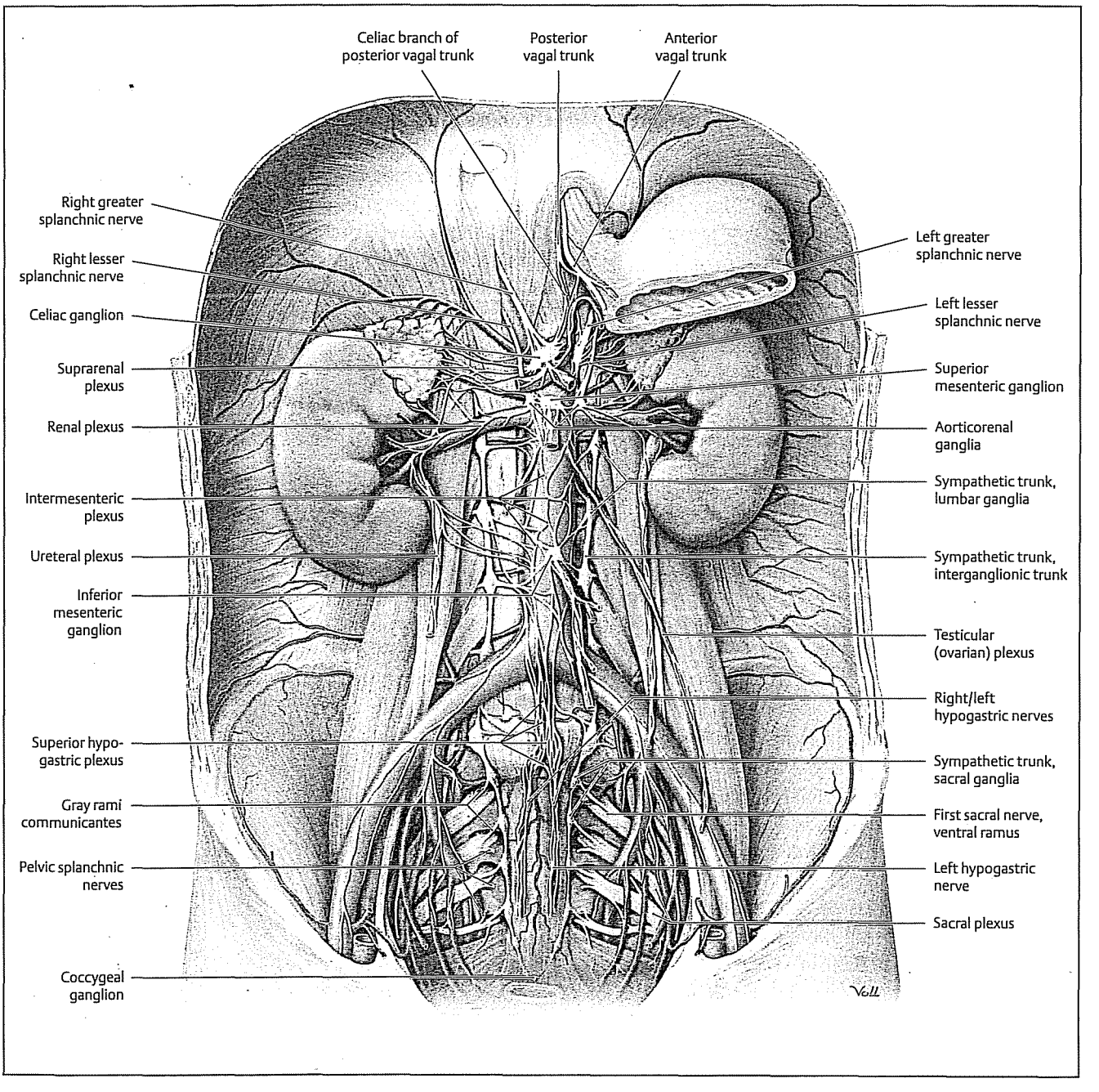


Fig. 3.83 **Overview of autonomic ganglia and plexus in the abdomen and pelvis.**

entery, cholera, typhoid fever, chronic diarrhea, chronic nephropathy, diverticulitis, after abdominal surgery, and the like.

Contraindications Hemorrhagic diathesis, anticoagulant therapy; large renal cysts, kidney tumors or malformations; suspected aneurism of the renal artery, purulent inflammatory perirenal processes, hydro- and pyonephrosis, patients with only one kidney. Surgical section of the sympathetic chain in the patient's history does not constitute a contraindication, because shortly after the surgery, new vegetative pathways will form (Killian).

Materials Needle: 80–100 mm × 0.8–1.0 mm (thinner needles are too flexible!).

Quantity 2–5 mL.

Technique

a. Original method according to A. W. Vishnevski (1933). In this, the patient is placed on their side on a roll cushion, as for a kidney operation. The 100–120 mm-long needle is inserted at right angles to the skin surface through a quaddle in the angle between the 12th (!) rib and the long extensor (erector spinae) muscle of the back. The needle is advanced under constant plunger pressure through the musculature and the posterior renal fascia into the posterior interfascial space. The neural-therapeutic solution can now flow out of the syringe without meeting any resistance.

   The large quantity of 150–200 mL 0.25 % Novocaine (procaine) solution pushes the anterior and posterior layers of the transverse fascia apart and the product can thus spread in a cranial and caudal direction. It eventually arrives in front of the kidney as far as the renal and suprarenal plexus and beyond as far as the nerve structures of the abdominal organs and especially the sympathetic chain. This method has been used not only for adults but also in children from the second month of life. According to its author, no negative consequences directly attributable to this method were observed.

b. We have slightly modified Vishnevski's method and made it safer. The patient strips to the waist, stands close to a table, and places their trunk flat on it. This is the easiest way for them to relax. If this arrangement is not possible, it will suffice if they support themselves on their fully extended arms in such a way that the trunk is bent slightly forward. If we palpate from the posterior axillary line along the lowest palpable rib (i.e., the 11th rib!) medially towards the spine, we reach the bundle formed by the long extensor muscles of the back, about three finger breadths from the line of the spinous processes. The entry site is in the depression that can be felt there between the lower edge of the 11th rib and the muscle bundle. We set a quaddle over this point, in order to make the entry of the needle painless. The patient does not feel the needle as it is advanced in depth. To make doubly sure, it is advisable first to percuss the lower limit of the lung and mark the injection site two finger breadths below it. Before giving the injection, we ask the patient to breathe deeply in and out and then to hold their breath for a few seconds when we tell them to. With patients who are slow to understand or hard of hearing, this may need to be practiced a few times. We then tell the patient to breathe in deeply and swiftly and painlessly pierce the skin as they do so.

   The 80–120 mm-long needle tends to bend on entry. This can be avoided by first impaling a sterile swab and using this as a support and guide by holding it between the left thumb and forefinger. Alternatively, the needle may be held near its point in a pair of sterile forceps to guide it through the skin.

   We now ask the patient to breathe out fully and hold their breath, so that the lower border of the lung will move up as far as possible. The needle is then advanced from its entry point about 30 ° medially to the sagittal and 60 ° cranially to the transverse plane, i.e., obliquely rather more up than inward, in the direction of the normal position of the contralateral nipple, only until (depending on the adiposity of the patient), after overcoming the resistance offered by muscle and fascia, one has the distinct sensation at a depth of some 80–100 mm that the needle has penetrated into a void. If one learns to advance the needle under steady pressure on the plunger, it is easy to know when the correct depth is reached since the contents of the syringe then flow out without resistance. The point of the needle is now in the interfascial space near the upper renal pole, in the vicinity of the important suprarenal gland, below the dome of the diaphragm and thus in the neighborhood of the pre-aortic and other ganglia mentioned previously, and of the upper lumbar sympathetic chain. The needle must not be inserted any deeper than that! After aspiration we now inject only about 2 mL and never more than 5 mL. Here, as elsewhere, it is less the quantity that is decisive than the site of the injection! If the injection is not located correctly on the upper kidney pole, we cannot expect it to produce a satisfactory result. In view of the possibility in this case of missing our target at such a depth, it is advisable to repeat the injection once or twice if there is no healing reaction the first time.

c. The advanced practitioner who has acquired the requisite "feel" for the different types of resistance offered by various tissues and who has a clear mental picture of the topography may prefer to go for the sympathetic chain directly. For this we go in at the point described in (b) above and then advance the needle medially until we strike the vertebral mass, and feel our way ventrally along the lateral vertebral surface just far enough to lose bone contact. The point of the needle is now immediately in front of the sympathetic chain, where we inject 2–5 mL.

It is generally best to combine the injection to the major splanchnic nerve with a → (T) preperitoneal injection into the → (T) epigastrium. These two injections should be repeated whenever required, as a rule if there is a recurrence of the symptoms.

3a. Possible Mistakes and Complications with Injections in the Abdominal and Lumbar Regions

If we aspirate arterial blood here, we have gone too deep and too far medially, and have entered the aorta. After the needle is withdrawn slightly, we can inject without risk. Penetration into the aorta is not dangerous, not even the injection into it, and this may be given intentionally for therapeutic purposes in circulatory disturbances affecting the lower extremities.

In connection with injections close to the vertebrae (sympathetic chain, paravertebral, sciatic root anesthesias), we cannot always avoid unintentional penetration of the spinal meninges, spinal dura mater, even when using the correct technique. When exiting the spinal canal, the nerves can be accompanied by leptomeningeal pouches and the needle can penetrate these. For this reason, it is mandatory to aspirate in two directions (twisting the needle 180°) before injecting. Direct penetration of the spinal canal is only possible when using a false technique. This type of injection should only be chosen and applied with due caution if simpler measures and less demanding techniques have failed.

If liquor is aspirated, the needle went too far medially and entered the spinal canal or it ended up in a liquor pocket of the nerve sheath. The needle is immediately withdrawn and no injection is given at this level on the same day.

When using the small amounts of procaine recommended by us, accidental intrathecal injection in the lumbar region would merely produce lumbar anesthesia, which remains without any consequences as soon as it passes off. The specific gravity of liquor is 1.0070, lidocaine is 1.0035, and procaine 1.0055. Hypobaric solutions ascend in the liquor space, hyperbaric descend, and isobaric show the tendency to remain at the location of injection. Again, pressure, concentration, amount, and catabolism of the injection have to be considered. After an unintentional spinal anesthesia, we have the patient lie down with the head in a lowered position. We comfort the patient and assure them that the paralysis will not last long (1–4 hours, depending on the local anesthetic used). The circulatory system has to be monitored. Lumbar anesthesia is not dangerous if the local anesthetic does not contain additives. It needs to be remembered that, due to its speedy resorption and catabolism, procaine acts anesthetically for a shorter period than lidocaine or mepivacaine.

Severe headache can be the result of perforation of the nerve root sheath, due to liquor leaking through the puncture opening. The same can happen in the case of lumbar punctures. Entering skin cells, blood, or antiseptics may cause non-bacterial infection.

Another cause for severe headache has been found (Krauseneck). The use of combination preparations and local anesthetics from multiple dose vials in the area of the spine should be avoided. Multiple dose vials contain a bacteriostatic additive (methylparaben = methyl p-hydroxybenzoate), which can cause immediate irritation, such as ataxic gait and a tingling sensation in the legs, when entering the nerve root diverticuli. On the day after the injection, the preservatives may cause intoxication symptoms including headache, vertigo, vomiting, nausea, nystagmus, loss of blood pressure, and meningeal syndrome. This is why we use pure local anesthetics without additives only, and refrain from the use of combination preparations for this type of injection. We have to ensure that the ampules that we use for this purpose are also free of bacteriostatic additives.

The above-mentioned complications are rather rare and I have not encountered them in 40 years of practice. Nevertheless, they have to be listed in a textbook and their occurrence considered. When following the described protocol, it is almost guaranteed that the irreversible complications reported by Stoehr and Mayer can be avoided.

Perforation of the kidney: The needle can occasionally enter the kidney if the patient has not breathed out, or breathes in again during the injection, if the patient moves suddenly, or if the needle lies too far caudally. One feels an unexpected blunt resistance and the patient reports severe pain at the injection site but which does not radiate. After correcting the position of the needle, one can proceed with the injection. As a rule, perforation of the kidney is of no consequence. According to Spain, 5 % of macroscopic hematuria and 3 % of renal colics that may occur fol-

lowing perforation of the kidney are "disturbances of a temporary character and require no treatment." He also states: "Extensive retroperitoneal bleeding might be hard to detect, because in this area, larger amounts of blood can collect without producing any symptoms."

In the countless cases I have treated I have seen only a few hematurias, which passed off without further treatment or any later sequelae after 3 days' bed rest with an increased fluid intake. Surgeons subject the body to a great deal more when they lay free the kidney, pre-luxate it and split the capsule, not to mention the urologists who intentionally perforate the kidney with a substantially thicker needle during a percutaneous needle biopsy in order to obtain tissue material for their purposes. In both these cases the generally insignificant amount of afterbleeding is accepted as perfectly normal. Compared with the value of this very frequently used injection of ours, the risk is insignificant. To any patient, blood is always an alarm signal. In hematuria, the mixture of blood with urine (and with water in the toilet pan) always suggests a far greater loss of blood than does in fact occur.

In my many years of work as medical referee, only three cases have come to my knowledge where a renal hemorrhage has been so severe following accidental perforation that the patient had to be admitted to hospital. It is possible for a massive hematoma in this location to exert pressure on the splanchnic nerves, which can cause symptoms of an adynamic ileus: vomiting and bloated abdomen with lack of peristaltic sounds. F. Huneke published such a case. In 40 years of practice, he saw only a single case in which "a massive hematoma developed several hours after an injection into the renal bed, with severe reflex symptoms, which for a time resembled a peritonitis. Fortunately, no surgery was undertaken. Over the next few days the hematoma was again completely resorbed. The only thing that persisted was the cure of the patient's previous stomach disorder for which the injection had been given.

This kind of thing can neither be foreseen nor avoided, and looked at in the light of day, it is not as tragic as the patient may perhaps feel it to be. The situation described above shows that responsible observation through clinical supervision could be better than the rash decision to perform surgery.

In his book Peripheral Nerve Block Pharmacologic by Local Anesthesia, Jenkner wrote:

> Although perforation or passing a needle through an organ in the abdominal cavity (e.g., also the kidney) seems in theory possible and even necessary, there has never been any negative report on this in publications. For example, in 3000 closely investigated splanchnic-nerve blocks, not a single case of hematuria, peritonitis etc. has been found. Thus, such perforations can produce only minor or unrecognized symptoms. The celiac ganglion should not be blocked in patients whose general condition is poor.

This last remark applies to our technique only in a few exceptional cases. Jenkner uses 20–25 mL 0.5 % Scandicaine, generally with adrenalin, an additive that we absolutely reject.

- If one meets a bony resistance at a depth of 30–40 mm, this is the lateral process. The needle is withdrawn slightly and is then advanced again either above or below the lateral process. If the patient reports a shooting pain down into the legs, we have found a spinal nerve. The position of the needle needs to be corrected by a small amount. If, following an injection into the lumbar sympathetic chain, the patient is temporarily slightly unsteady on his or her legs, this indicates that the motor root fibers have been partially paralyzed. This condition is also harmless and, if procaine has been used, will pass off again within about 30 minutes.
- In the injection to the abdominal sympathetic chain, if the wrong technique is used (the needle is too long, the needle is advanced too steeply or inserted too deeply, the patient continues breathing), it may on rare occasions penetrate the diaphragm and reach the lung (if it is inserted too far). In this case the patient coughs immediately and tastes blood, and there will be blood in his or her sputum. This is no cause for concern. Any pneumothorax produced in this way will disappear after a few days without further treatment, provided the patient takes a little care to avoid overexertion. With prior percussion to ascertain the limits of the lung (entry point two finger breadths below), due regard given to the recommendation that immediately before the injection the patient should breathe out and hold their breath, and particularly when remembering not to advance the needle after the myofascial resistance ends and the anesthetic solution flows freely, this will in fact happen only on the very rarest of occasions.

Contraindications Apart from extremely rare cases of procaine allergy, there are no contraindications. In such cases we use a preparation based instead on lidocaine (e.g., Xyloneural). In view of the small quantities we use, neither age, a reduced general state of health, nor heart or liver disease are contraindications. With aspiration and a little care, any potentially dangerous complications can be avoided. Nothing much can happen. Anyone who takes the trouble to learn to use this effective weapon will be rewarded a thousandfold for his or her pains.

One can never be sure that a patient does not have some anatomical anomaly. The doctor must therefore encourage the patient to telephone him or her for advice if, after an injection, he or she has symptoms that worry the patient. A quiet, reassuring talk and instructions of what they should do meanwhile will generally be all that is needed. But when in doubt, no doctor should be afraid to refer the problem to a specialist colleague or to send the patient to hospital for further observation. To hesitate too long can do more damage than the mishap itself. There is no medical intervention totally without risk. If such a case comes before a court, a doctor's correct behavior will always argue in his or her favor, but the court will have less comprehension for any irresponsible attempt to hide something that happened accidentally.

Teeth***

Before testing a patient's teeth, the patient should be asked whether he or she occasionally has a severe toothache and if so, where. Examination can bring to light fistulas, remains of teeth, lividly discolored areas of mucosa, or atrophic changes after inflammation. No neural therapist should ever omit palpating extraction scars, the zone above the dental roots, and the mucosal sulcus for pressure-sensitive areas. All changes found must be injected in a single session. If palpation of the jaw bone produces localized pain and the local lymph glands are palpable, we have to suspect an odontogenic interference field. In addition, the x-ray picture and vitality tests made by a dentist, together with the electric focal test, are the means available to us for finding the correct injection sites. This is also an appropriate place to remind ourselves that interference fields can be due to the use of several types of metal in the mouth (see p. 91). Difficult as it may be to identify any suspect tooth, the test itself is simple enough.

Indications

1. *Segmental therapy:* In all inflammatory processes in the region of the teeth, mouth, and upper and lower jaws (together with any local treatment that may prove necessary, such as removing the protruding edges of fillings or imperfect crowns, scale, etc.), e.g., acute or chronic periodontitis, alveolitis, post-extraction pain, difficult dentition, paradontopathic conditions, irritation of the dental pulp, slow-healing wounds, ulcerating stomatitis, recurrent aphthuose stomatitis, etc.
2. *Interference-field search:* As test injection to devitalized, infected, or displaced teeth, alveolar pockets, inflammation due to protruding fillings and along the edge of dental crowns, residual os-

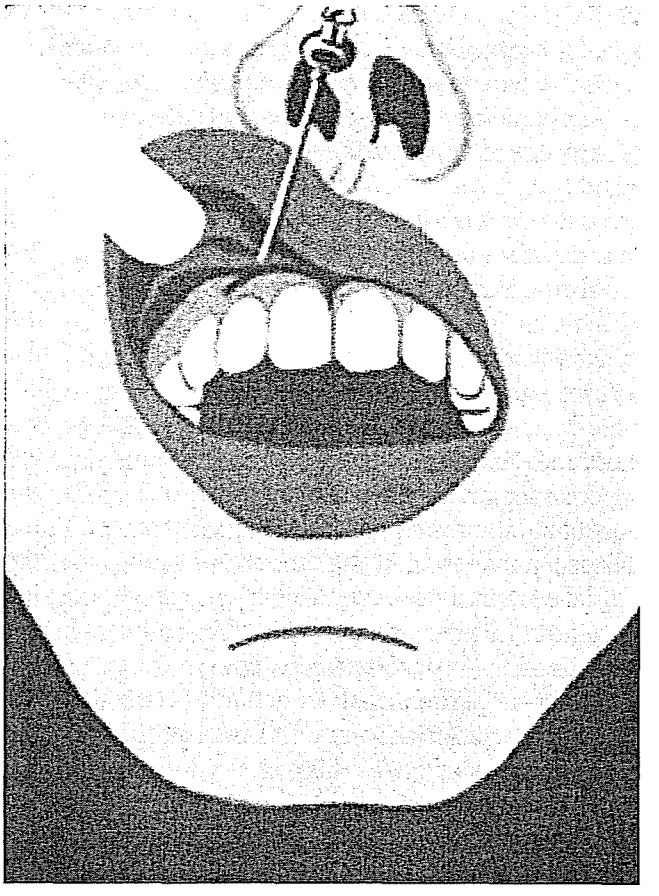


Fig. 3.84 Injection to the dental root (from a buccal direction).

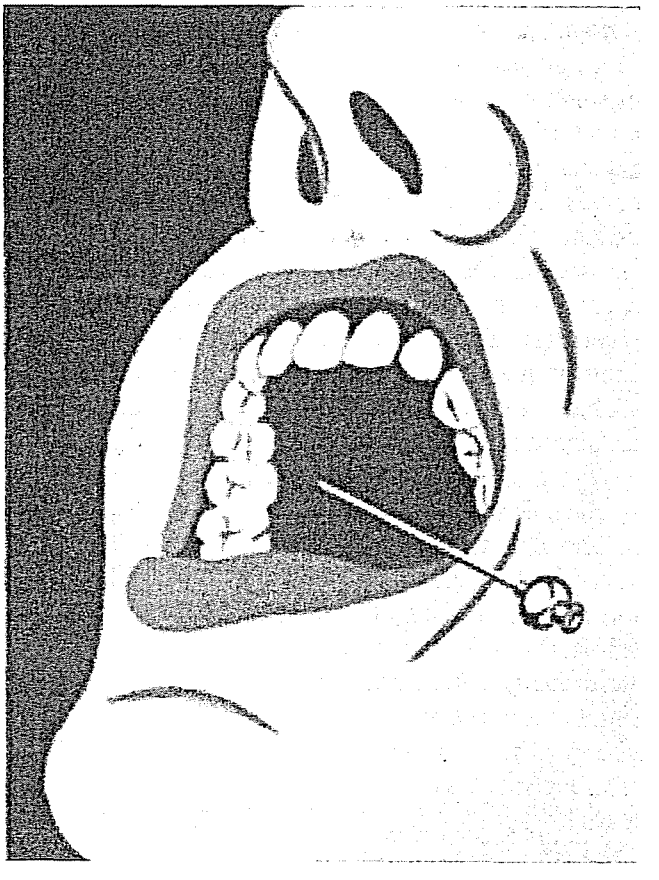


Fig. 3.85 Injection to the dental root (from a palatinal direction, to the periosteum of the maxilla).

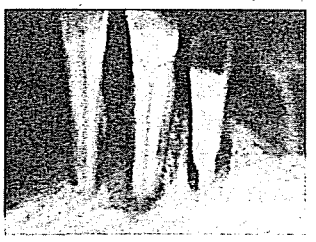


Fig. 3.86 Granuloma.

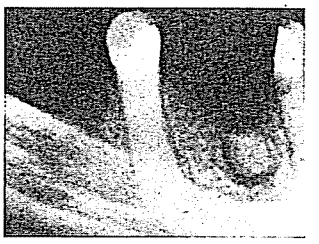


Fig. 3.87 Infected residual root.



Fig. 3.92 Widened periodontal space.

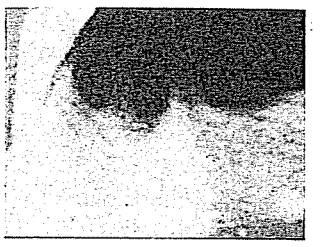


Fig. 3.93 Residual osteitis.



Fig. 3.88 Foreign body.



Fig. 3.89 Alveolar pockets.



Fig. 3.94 Displaced tooth.



Fig. 3.90 Devitalized teeth.

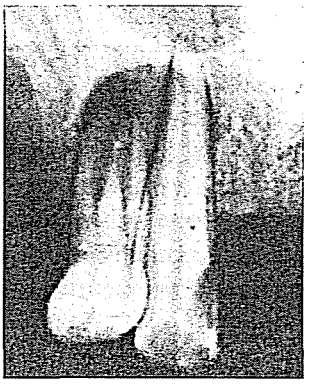


Fig. 3.91 Cyst.

teitis, foreign bodies, excessively stressed teeth used for anchoring or acting as pillars for dental bridges, closely-set teeth, extraction scars, scars due to root resection and surgery to the maxillary sinuses, parodontosis, residual roots, cysts, gingivitis, stomatitis, etc.

Materials For anesthetizing the injection sites, Gingicaine surface anesthetic (spray) or the Dermo-jet with the dental attachment can be recommended; for injections to the periosteum beyond the alveolar margin, a cartridge or locking syringe is best. If one of these is not available, a size 18 or 20 needle firmly attached to a normal syringe can also be used.

Quantity Only about 0.2 mL of procaine solution or Xyloneural from a cartridge ampul is used per injection.

Technique

a. *Injection to the periost above the dental root:* We use only 0.2–0.3 mL (infiltrating into the gingiva down to the periost), both palatinally and bucally, for the injection to each dental root to be tested. The injection is given submucously, intramuscularly, and infiltrating all the way down to the periosteum. There is no need to use penicillin, Anthroposan or the like as an additive. In the injection, a millimeter or two may be decisive for the result. The point of the needle should be taken particularly into the hyperalgetic points and into the middle of scar craters following dental extractions. Occasionally, it will sink all the way into the maxillary sinuses without meeting any resistance. This is also an appropriate place to remind the reader of the importance of residual osteitis. When carrying out dental tests, the neural therapist should always include rest periods to enable the patient to assess the results if any and thus localize the culprit within as narrow a range as possible.

   See Figs. 3.**84**–3.**94** for a selection of possible interference fields in the dental region.

b. *Intraligamental testing:* Another test method, which also reduces the failure rate of the method described under (a), is the intraligamental (intra-aveolar) anesthesia. The local anesthetic is injected into the periodontium (desmodont, vascular connective tissue periosteum that surrounds the dental root inside of the alveola)

with a special syringe (e. g., Henke-Ject) that exerts high pressure through a trigger. The injection is almost pain-free. The 0.3 mm needle is put obliquely against the tooth and is advanced 1–2 mm along the tooth. For injections into the distal area of the molars, the needle can be bent and inserted into the fissure with the finger. The solution travels from the dental neck through the circular ligament into the periodontal fissure and from there to the nerve entrance at the apical foramen. The tooth can be extracted immediately (Fig. 3.**95**).

If injection syringes are used for testing, the infiltration has to take place very slowly. Per dental root, one trigger pull of 0.2 mL is sufficient. This requires no less than 20–30 seconds (applying constant pressure)! Only if the testing is done this way can damage to the periodont and loosening of the tooth be ruled out. In cases of periodontitis, this type of testing should not be performed.

The idea that instead of injecting several adjacent teeth separately it should be possible to deal with them all together by conduction anesthesia is obvious and tempting, but wrong. For test purposes, conduction anesthesia is unsuitable, because it does not deal with an interference field that may be present. Each tooth must be tested separately, and all suspect teeth need to be tested in a single session! For neural therapy is more than simply "curative anesthesia" or "therapeutic local anesthesia": the site of the injection is decisive, not the anesthetic effect as such!

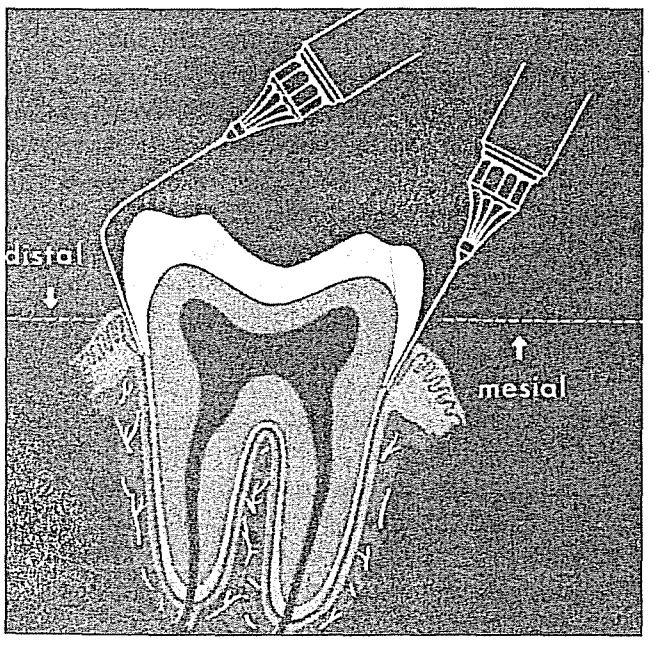


Fig. 3.**95** Intraligamental anesthesia to a molar.

Thyroid***

Indications: → thyroid disorders, Basedow disease, thyrotoxicosis, hypo- and hyperthyroidism (including "latent hyperthyroidism" according to Dosch), goiter, anxiety, a sensation of pressure or of a lump in the throat, heart palpitations, "essential hypertonia," sleep disorder, menstrual disorders, signs of miscarriage, habitual abortion, menopausal complaints, primarily hot flushes; also try in alopecia, tachycardia or extrasystoles with increasing anxiety; also in fever of unknown etiology, loss of weight and exhaustion with loss of hair, excessive sweating, → neurodystonia, "nervous" abdominal and digestive disorders, increased nervousness and excitability, especially when accompanied by trembling or compulsive weeping, but also when presenting with signs of vegetative overexcitability, including temperature regulation disorders (e. g., increased temperature, flushes, dermatographism, intense sweating, cold feet); hyperemesis gravidarum; in psychological disturbances following castration or in ovarian insufficiency. In acupuncture, these thyroid points are also treated in speakers or singers suffering from hoarseness or loss of voice.

In all indications it is irrelevant whether the basic metabolism is normal, increased, or reduced. When an interference field is subjecting the pituitary centers of the diencephalon to stress, this is also frequently accompanied by a substantial reaction of the thyroid. Similarly, due to the mutual relationships within the hormonal system, an interference field in the pelvic region can often also involve the thyroid. A series of injections into the gland, initially weekly and later at longer intervals, will clearly restore the subjective and objective equilibrium in such women. Our thyroid treatment proves to be an effective complementary treatment for → alcoholism. It helps to alleviate the neuro- and psychovegetative side effects of withdrawal (Dietz). It is also helpful in → geriatric disorders. If a thyroiditis has left an interference field, this injection can effect a cure via a lightning reaction.

Relative contraindications Radioactive iodine treatment reduces the parenchyma by irradiation. The success of this form of treatment can be assessed only weeks or even months later. During this period, one should refrain from procaine treatment, because the regulating function of the thyroid remains blocked by the radiation damage it has sustained while its effects last. In such cases, the response to the procaine injection may be unusual and can often be paradoxical. In other words, the gland may be over-stimulated to the point of hyperthyroidism.

In two cases, thyroiditis occurred, which, however, resolved after about a week. One case was reported to me where an abscess formed following the injection of procaine into a thyroid that had pre-

viously been treated with iodine 131. In an attenuated form, this also applies to scintography. If, in such a case, treatment is attempted at all, one should limit oneself to inserting acupuncture needles into the left and right lobes of the thyroid (ST-10), and a third to the dorsal edge of the jugular notch of the sternum (CV-21). We can inject into "cold" or "warm" thyroid nodules only if needle biopsy has excluded a malignant process.

Materials The needle should be as fine as possible, about size 18; quantity 0.5–1 mL of 1–2 % procaine (without additives!) for each lobe of the gland.

Technique It is best to inject the patient when he or she is lying down, since the gland then protrudes forward. The patient is asked to swallow, and the position and size of the thyroid is observed and palpated. The fine needle is inserted quickly and 0.5 mL (never more than 1 mL) of procaine is then injected on each side into the parenchyma of the gland at a depth of 10–20 mm, after checking by aspiration that the point of the needle is not intravasal. This could easily happen, since the thyroid is rich in blood vessels; in such a case, all one need do is to correct the position of the needle and to inject only when it is outside any vessel. If the isthmus is clearly enlarged, a similar quantity is also injected there, but only superficially.

If, following the injection, a Horner syndrome is produced, this is a welcome side-effect but indicates too deep an injection. Compulsive weeping may occasionally occur immediately after the injection and indicates that a psychological component of the disorder has been eliminated and that emotional blocks are now being released, to give way to a more balanced state.

Injections into the thyroid should initially be repeated at about weekly intervals and, if successful, should then be given at longer intervals determined on an individual basis. Generally, the patient will know by their own observations and state when further treatment is required.

In women, treatment of the → (T) pelvic region given in addition will often increase the effectiveness and the result. The interaction between thyroid and ovaries is well known. In cases of hyperthyroidism, repeated → (T) intravenous procaine injections reduce the metabolic rate.

We will not always succeed with the attempt to normalize the size and function of the thyroid. We cannot expect success after strumectomy, radiation therapy, and degeneration due to age if sufficient reactive thyroidal tissue is missing. Severe conditions that cannot be helped through conservative treatment have to be treated surgically. According to Pfannenstiel, there is no other surgically treated disorder that shows as many recurrences (8–15 %) as strumectomy. This is certainly due to the fact that the symptomatic subtotal thyroid resection cannot eliminate the causes for dysregulation and hyperplasia. These causes include interference fields and chemical regulation blocks, which can inhibit the self-healing mechanisms of the body. Thus, we recommend once again: neural therapy before strumectomy! (See Fig. 3.**96** for injection into the thyroid.)

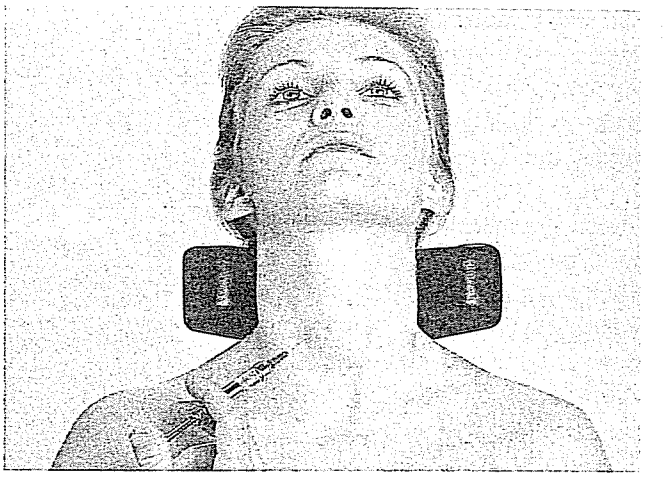


Fig. 3.**96** Injection into the thyroid.

Tonsils

1. Palatine Tonsils***

Indications

1. *Segmental therapy:* In treating chronic tonsillitis, recurrent sore throat and peritonsillar abscesses, sensation of a foreign body in the throat.
2. *Interference-field search:* As a test injection in patients whose clinical history indicates scarlet fever, diphtheria, frequent or severe sore throat, tonsillar abscesses, tonsillotomy or tonsillectomy.

Materials 0.8 mm diameter × 80 mm-long needle, short-beveled. If the needle is too short and accidentally comes off the syringe, it may be aspirated or swallowed. Moreover, an unobstructed view of the working area is impossible if the syringe is in the mouth.

There is also a special tonsillar test needle according to Strumann, with a plate soldered in position, to prevent the needle from going deeper than 5 mm. Normally it is perfectly possible to dispense with this. Moreover, the soldered connection may melt under frequent hot-air sterilization. In an emergency, it is easy enough to cut off the end of the plastic tube protecting the disposable needle so that the needle projects only 5 mm, thus making it impossible to insert it further when giving the injection. The quantity of solution used for each tonsillar pole is 0.5 mL.

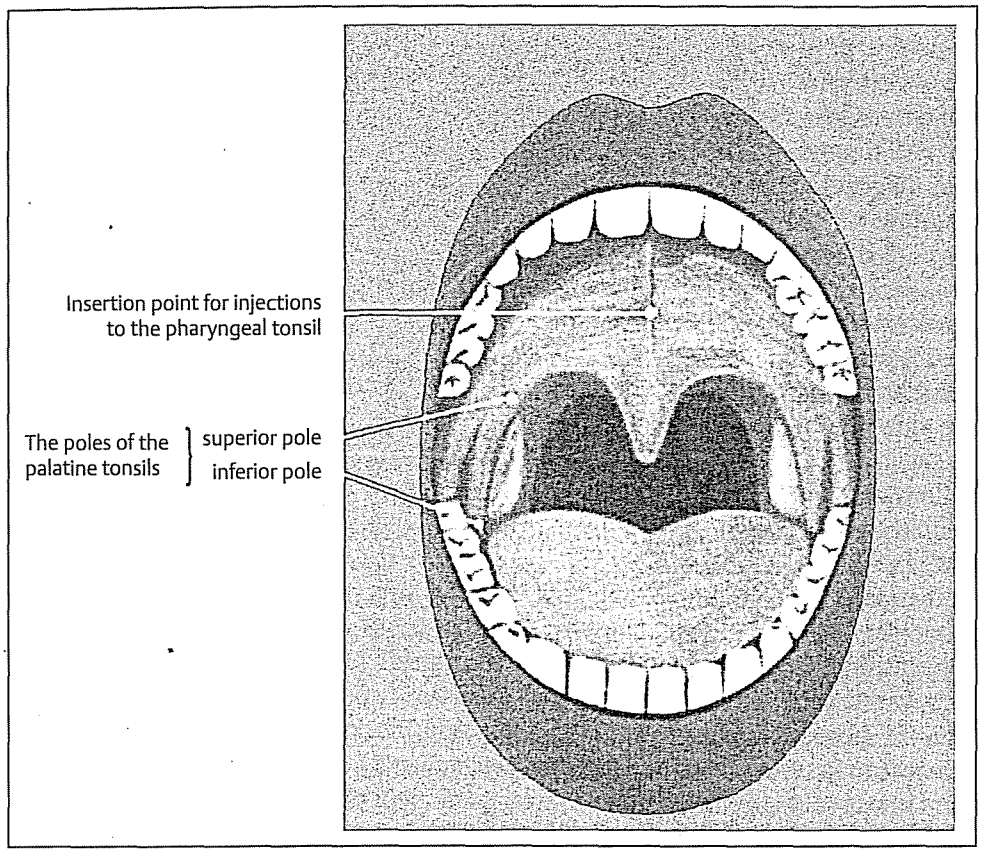


Fig. 3.97 Injection to the tonsils.

Technique First remove any loosely fitting dental plates and false teeth. If possible, the patient should be seated on a chair with a neck support, or their head should be supported by an assistant or by leaning it back against a wall. This injection should not be attempted if the head cannot be firmly fixed. Good light is another essential prerequisite for good results.

The patient should open the mouth wide without sticking the tongue out. The spatula should not be placed too far back, about the middle of the tongue, and should not be pressed down too hard. If the patient is kept distracted by being asked to breathe deeply in and out on command, this will help prevent the undesirable gagging reflex and simplify the physician's task. It is still easier if the patient pants, i.e., takes continual shallow breaths in and out. If this is still not adequate, we anesthetize the pharyngeal wall with Xylocaine spray and push the base of the tongue aside in a medial direction about level with the wisdom teeth.

Particularly for the first test injection, we inject both the upper and lower tonsillar poles, in order to reach as much of the tonsillar tissues with the injection as possible and reduce failures to a minimum. For this the procaine is injected submucously above and below the tonsillar poles. Textbooks caution that, in the case of retrograde blood flow through anastomoses (Bolus injection too fast and paratonsillar infiltration too deep), there is a possibility for the local anesthetic to be pressed through the ascending palatine artery and the external and internal carotid artery into the skull. I have never experienced this scenario. For the injection to the lower poles, the base of the tongue is pressed aside in a medial direction at the end of the alveolar ridge and the anesthetic is then injected submucously between wisdom tooth and the root of the tongue. By this means we prevent tissue damage with the point of the needle, which, in this bacteria-laden tissue, could easily lead to abscess formation. It is perfectly safe to swallow any procaine that runs down.

To stimulate the lymphatic flow, we may also set one to three → (T) quaddles in a caudal and medial direction from the mandibular angle. Figure 3.**97** shows an injection to the tonsils.

If the patient has undergone tonsillectomy, the injection is not given to the tonsillar poles but always into the middle of the scar tissue, directly under the surface of the scar. Sometimes, after the injection under a hard tonsillectomy scar, a Horner syndrome is observed. This is a sign that the numerous autonomic nerve fibers in this area are closely connected with the stellate → (T) ganglion.

The injections described above are absolutely without risk and may even be administered to infants (eczema, cradle cap), provided that the most important safety precaution known to us is ob-

served: the injection of any preparation containing procaine into any vessel leading to the brain (cranially from the heart) may in certain circumstances lead to serious complications! This means that before any injection in the region of the head, neck, and the upper portion of the chest, it is essential to aspirate to ascertain that the needle is extra-vasal. If the needle is placed submucously or at least superficially as described, there is no such risk! The carotid artery is all of 40 mm away from the upper, and almost 20 mm from the lower tonsillar poles. But this does not relieve us from the obligation to aspirate briefly before every injection, preferably in two directions (Fig. 3.**2**).

Some patients draw our attention to an autonomic asymmetry, which can be proved objectively from the blood picture (Bergsmann) by telling us that "everything always happens to me on my right (or left) side." Generally, though not always, the right-hand tonsil acting as an interference field affects the right side of the body, and the left-hand tonsil will affect the left side. Despite this, I always recommend that the first test injection be given bilaterally, to all four tonsillar poles. If there is a positive reaction and if the treatment needs to be repeated, one can then try to make do with an injection only on the side concerned and perhaps by treating only the upper pole.

2. Adenoids (Pharyngeal Tonsil) and Pharyngeal Hypophysis***

Anatomy The pharyngeal tonsil is located at the roof of the pharynx, toward the posterior wall of the pharynx. Together with the palatine tonsil, the lingual tonsil, and the variable tubal tonsil, they form Waldeyer's ring (lymphoid ring). Directly in front of it, the pharyngeal hyposphysis is located in newborns. It retards in the course of one's life. According to Seithel, it remains a consistent structure of 0.33 mm^3. It is located at the point of the pharyngeal roof where the anterior lobe of the pituitary gland has developed and consists of adenophypophyseal tissue. Due to the internally secreting nature of the tissue, this scattered cellular lump has the same function (less, based on the smaller mass) as the anterior lobe of the pituitary gland, which is very important for the hormonal control of the vegetative system, for example, through the effects of the adreno-corticotrophic hormone ACTH, which it produces, on the adrenals, spermiogenesis, and follicle maturation. Via endorphin substances, i.e., peptides formed in the brain and the pituitary, the hypophysis is also capable of having a damping effect on the sensation of pain.

Indications

1. *Adenoids (pharyngeal tonsil) injection:* adenoidal proliferation, undulant fever in mouth-breathers when retronasal inflammation is suspected; allergic rhinitis, loss of the sense of smell or taste, inner-ear deafness, and interference field testing of adenotomy scars.
2. *Pharyngeal hypophysis injection:* Anatomy indicates a supportive role for these injections if we want to affect the pituitary gland (e.g., in addition to injections to the upper → (T) cervical ganglion). Try in inoperable pituitary tumors, pluriglandular dysfunctions, hormonal dysfunction during menopause, diabetes mellitus, and such (Seithel).

Materials 0.8 mm diameter × 80 mm-long needle, short-beveled; for the direct injection into the pharyngeal hypophysis, the point of the needle is slightly angled.

Quantity 0.5–1 mL of procaine solution.

Technique

a. *Adenoids:* The needle is inserted without prior mucosal anesthetic above the uvula in the midline immediately adjacent to the boundary between hard and soft palate. It is then advanced directly to the posterior wall of the pharynx, until bone contact is made, following which it is withdrawn 1 mm and the injection given after negative aspiration.
b. *Pharyngeal hypophysis:* To reach the pharyngeal hypophysis, the last 15 mm near the point of the needle must first be bent about 45 degrees with sterile forceps. This facilitates penetration further cranially to the anterior wall of the sphenoidal sinus. If the angled point of the needle is then inserted horizontally as far as its bend and the syringe lowered, the puncture channel is no larger than that described in (a) above. The injection is not particularly painful and absolutely without risk. If the patient has a nosebleed after the injection, he or she should be made to breathe through the nose for about a minute with their head bent back. This should stop the nosebleed.

Trigeminal nerve See → (T) nerves (nerve-exit points) (p. 315).

Trigeminal nerve root See → (T) Gasserian (otic) ganglion (p. 368).

Trochanter Major***

Indications Hypertrophic arthritis of the hip joint, coxitis, coxalgia, spondylitis, ankylosing spondylitis (Bechterew disease). In acupuncture, the tro-

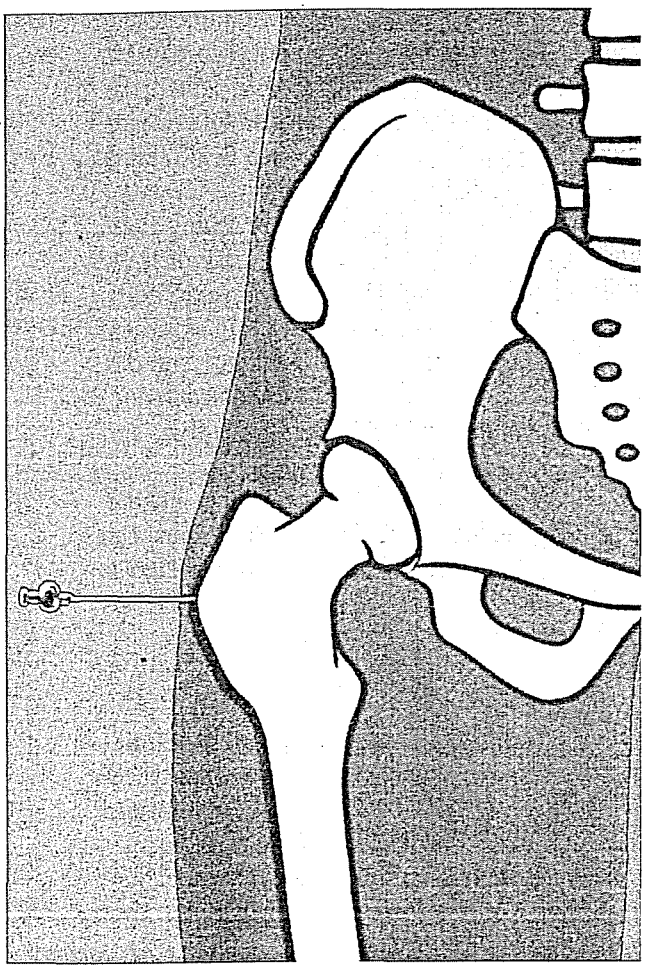


Fig. 3.**98** Injection to the trochanter major.

chanter is also needled for sciatica and arthritis of the knee.

Materials Size 1 needle for slim patients, correspondingly longer for adipose patients.

Quantity 2 mL of procaine solution.

Technique The trochanter can generally be readily identified on the standing patient, and better still when they are lying down. We insert the needle as far as the periosteum and there inject the 2 ml. The injection should be repeated as required. The effect will then usually increase (see Fig. 3.**98**).

> *The value of an important discovery is determined only by its usefulness. This is why revealed truth is initially admitted only in private, becomes known more widely only slowly and falteringly, until that which had earlier been stubbornly denied at last seems to be something perfectly natural.*
> Goethe

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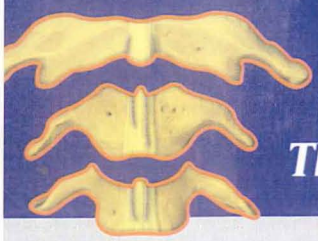
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The definitive guide to neural therapy

More and more patients with chronic pain and other disorders are relying on neural herapy—a treatment concept based on employing the properties of local anesthetics o regulate disorders of the autonomic system—to alleviate their symptoms. Yet there re precious few specialized, didactic resources for medical practitioners interested in earning about this highly effective therapeutic alternative.

he Manual of Neural Therapy According to Huneke offers accessible, practical information n all aspects of neural therapy as it is practiced today. Designed for use in the classroom nd in the clinic, this illustrated manual comprises three sections:

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