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Acupuncture—Cure of Many Diseases
Atlas of Acupuncture
The Treatment of Disease by Acupuncture
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Acupuncture: The Ancient Chinese Art of Healing and How It Works Scientifically

ACUPUNCTURE

The Ancient Chinese Art of Healing and How It Works Scientifically

Completely Revised Edition

FELIX MANN, M.B.

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these are as yet unknown to us) despite the fact that they are expressed in a language that we might call unscientific.

Some doctors or patients may indeed wonder how one can practise a form of medicine where the theories on which that practise is based are possibly suspect. Just as a doctor will prescribe aspirin because he knows what are its effects in the body of a patient, so an acupuncturist will needle a certain acupuncture point because he knows what the consequent reaction of the body will be. It is of secondary importance to the doctor to know just why it is that aspirin has its specific effects, (no matter how intellectually interesting such knowledge might be.) At the time of writing little is understood of why the known effects of aspirin take place, yet aspirin, with its simple chemical formula, is the most commonly used drug in the world.

The reader will be made aware by various remarks throughout this book, particularly those in chapter XI, that I believe neither in the major part of the traditional Chinese theoretical explanation of acupuncture nor even in its practical application where this is based *solely* on traditional theory. Doctors who follow my courses in acupuncture will find that this divergence in both theory and practice is no hindrance to the successful treatment of a large number of diseases occurring in their patients. Doctors who wish to study acupuncture are welcome to write to me. From time to time I give courses, largely of a practical nature, during which I concentrate on those aspects of the subject that would be difficult to describe in a book.

NEURAL THEORY OF THE ACTION OF ACUPUNCTURE

In acupuncture, the needle is frequently placed at the opposite end and possibly opposite side, of the body from that of the diseased organ or site of symptoms. Under certain conditions one of these distant and contralateral pricks can have an effect in one or two seconds. This speed of conduction excludes the blood and lymphatic systems (at least in this type of response) and leaves to my way of thinking, the nervous system as the only contender.

There are other, though non-neural, theories:

Kim Bong Han* described a special conducting system of Bong Han ducts and corpuscles, corresponding to the course of acupuncture meridians. Kellner† has shown that some of the above theory is based on artefacts occurring in the preparation of histological slides. Some have thought that the meridians look like the lines of force round a magnet and postulate a magnetic theory. Others somehow manage to bring in quantum mechanics. A Japanese researcher thinks that there is a contraction wave following the course of meridians, along the surface of the skeletal muscles. Some liken the pinprick in the body to the electrical discharge of a condenser. A few say the pinprick releases cortisone or histamine or adrenaline but fail to explain the specific action of the acupuncture points. I once had a theory concerning the lateral line system in fish,‡ which I have since discarded. I am now fairly convinced that the nervous system is the transmission system used in acupuncture. The remainder of this chapter discusses this neural acupuncture theory: part is based on well-known anatomy and physiology, part is conjecture, and part requires experimental proof.

Cutaneo-Visceral Reflex

Acupuncture is based on the fact that stimulating the skin has an effect on the internal organs and on other parts of the body, a rela-

*Kim Bong Han. On the kyungrak system. 1964, Foreign languages publishing house, Pyongyang.

†International acupuncture conference in Vienna and German acupuncture conference in Wiesbaden.

‡See chapter XII of the 1st edition of this book.

cord by (1) a fast extraspinal route in the sympathetic chain of the same side and (2) a slower intraspinal route of limited ascent. Intercostal excitation can ascend only by a slow intraspinal route. This was demonstrated by the following experiments: Reflex discharges into the lower intercostal nerves on both sides were elicited by stimulating the left splanchnic nerve. Cutting the left sympathetic chain limited the upward spread of the excitation to the next 3 to 5 segments of the cord. The discharges in the nerves were now of decreasing size and of longer latency in these segments. Spread of activity on stimulating a lower left intercostal nerve was unaffected. Where the chain had been left intact and the cord transected, splanchnic excitation spread freely into segments above the transection, but spread of intercostal excitation stopped at this level. In those instances where there is a contralateral response, experiments involving unilateral section of the dorsal nerve roots were performed. It was concluded that the splanchnic afferent volleys enter the cord by the dorsal root, traverse the spinal cord and leave by the contralateral intercostal nerves. Similar research has been done by Miller, Ward*, and Duda.†

There are also long intersegmental viscero-visceral reflexes. The gastric-colic reflex is invoked when food entering the stomach causes mass contractions of the colon. Likewise in travel sickness where the afferent fibres are the trigeminal, glossopharyngeal or vagus and the efferents are the phrenics and intercostal nerves.

I have thus been able to show in this section that the leg muscles contract if, under the correct conditions, one stimulates: the abdominal viscera, the splanchnics, the intercostal nerves, the outer ear, the front feet, the skin of the back in the upper thoracic region and other areas many segments away from the dermatomes of the human leg (or hind leg in animals). The reverse of the above, namely stimulating the skin of the leg having an effect on the viscera, was demonstrated by Brown-Sequard in the same course of lectures mentioned earlier. He poured boiling water over the hind leg of a

*Miller, F. R., and Ward, R. A. Viscero-motor reflexes. American Journal of Physiology, 1925, 73: 329–340.

†Duda, P. Facilitatory and inhibitory effects of splanchnic afferentation on somatic reflexes. Physiologia Bohemoslovenica, 1964, 13: 137–141.

Duda, P. Localization of the splanchnic effect on somatic reflexes in the spinal cord. Physiologia Bohemoslovenica, 1964, 13: 142–147.

dog whose spine was divided at L3 and another dog whose spine was divided at T3. At autopsy two days later the former dog showed congestion of the bladder and rectum (segmental), whilst in the latter all abdominal organs were congested (intersegmental).

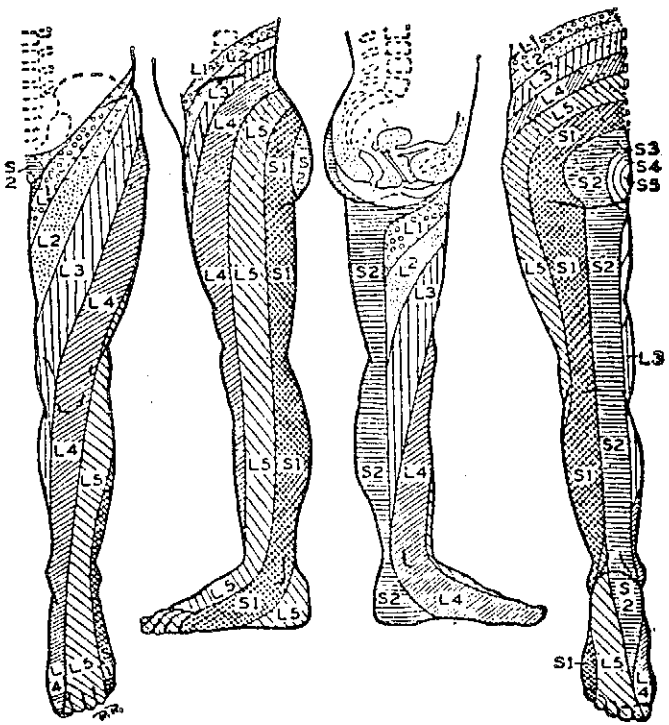

FIG. 12

The distribution of the acupuncture points on the legs is such that each organ corresponds to several dermatomes and each dermatome corresponds to several organs.

This problem can be partly resolved when it is realised that the

that when the 'stomach area' on the anterior third of the middle turbinate was stimulated that the gastric secretion and movement were increased.

It should be noted that in the above experiments stimulation of the upper turbinate affected the heart, the middle turbinate the stomach, and the lower turbinate the reproductive organs.

Specific Response versus Generalised Response

In the practice of acupuncture it is sometimes found that one (or a small group) of acupuncture points are effective in treating a certain patient. On other occasions, any one of several meridians (encompassing a large number of acupuncture points) can be effective. In the former case a specific stimulus is mandatory, in the latter nearly any general stimulus is all that is needed.

The specific response presumably takes place, along the lines of the nervous pathways described in the previous sections.

The generalised hypersensitivity on the other hand seems similar to the pain one can sometimes have with severe toothache when the whole of the same side of the face, arm and upper chest are hypersensitive. In the same way the viscera may sometimes become hypersensitive affecting the nerves in a large area, and hence only require in treatment an acupuncture needle put anywhere in a large area, in any of a large number of acupuncture points, or in any of several meridians.

In other cases a stimulus anywhere in a large area does not depend on hypersensitivity, but on the large number of neurones that have a final common path. Ashkenaz* stimulated the gall bladder of cats by inflating a balloon. This caused contraction of the panniculus carnosus muscle (the cat's equivalent of the platysma, but extending over most of the body). This viscero-pannicular reflex was only abolished when all the dorsal roots T2 to T9 were severed, a single root being sufficient to preserve the reflex, thus demonstrating the convergence that can take place.

Diseased organs seem to have a lowered threshold of response, for only a small stimulus is needed to correct a dysfunction of a

*Ashkenaz, D. M. An experimental analysis of centripetal visceral pathways based upon the viscero-pannicular reflex. American Journal of Physiology, 1937. 120: 587–595.

time of writing and in other papers* Sinclair advanced a branched axon theory partially to explain the observed phenomena, but since then he thinks the more conventional nervous pathways are the mediator.

I think the neurophysiological theory to explain the mechanism of acupuncture, which I have developed over the past years and described in this chapter, will soon be recognised as the basis for the scientific investigation and further development of acupuncture. No doubt there will be vast extensions, modifications and contradictions. But I will be glad if my investigations have sown a seed that others – neurophysiologists and clinicians – may tend further.

*Sinclair, D. C. The remote reference of pain aroused in the skin. Brain, 1949. 72: 364.

Sinclair, D. C., Weddell, G., and Feindel, W. Referred pain and associated phenomena. Brain, 1948, 71: 184.

(acupuncture points on the medial and anterior side of the thigh, (liver, spleen, kidney and stomach meridians) do not have very much effect on the liver, spleen, kidney or stomach, as the name suggests, but affect mainly the reproductive organs. There are similar discrepancies with some other points.)

If the dermatological charts of Keegan and Garrett, obtained by charting the hyposensitivity from loss of a single nerve root, are taken (Fig. 12) the remaining acupuncture points fit more easily into a dermatome pattern. The kidney and bladder, which from an acupuncture point of view function together would be S1 and S2; the gall bladder and stomach L5; the liver and spleen, which are hard to distinguish, L3 and L4. Perhaps the long intersegmental reflexes for the legs do not follow a dermatological pattern.

The problem is not too simple, as investigations by Travell and Bigelow* showed. In patients with pain encompassing several dermatomes it was found that a pinprick to the trigger area might relieve the pain in that dermatome or in several dermatomes or in one dermatome, then miss out a dermatome to relieve pain again in a further dermatome.

Acupuncture Points on the Head — Near and Distant Effects

Most of the acupuncture points on the head have a local effect, which could presumably be explained by local reflex arcs similar to segmental reflexes.

The apportioning of the acupuncture points on the head to the various internal organs is hard to follow both theoretically and in actual clinical acupuncture practice, though distant effects undoubtedly occur.

Koblank† investigated a reflex between the nose and the heart. He found a sharply defined area in the region of the superior concha of the nose, which if stimulated with a probe caused various cardiac arrhythmias in man, dogs and rabbits. When the vagus was cut on one side, the reflex remained intact; when cut on both sides the reflex was abolished for a few days and then returned, but weaker than formerly. When the maxillary nerve was divided on one side

*Travell, J., and Bigelow, N. H. Referred somatic pain does not follow a simple segmental pattern. Federation Proceedings, 1946, 5: 106.

†Alfred Koblank. Die Nase als Reflexorgan. 1958. Haug, Ulm. Also Fig. 13.

the reflex was permanently abolished when the same side of the nose was stimulated, but the reflex persisted normally when the healthy side was stimulated. From this it was deduced that the trigeminal nerve relayed the stimulation of the nasal mucous membrane to the region of the nucleus of the vagus, which then passed it on via the vagus to the heart. It was considered though that there was more than one final pathway as dividing the vagus only partially abolished the reflex.)

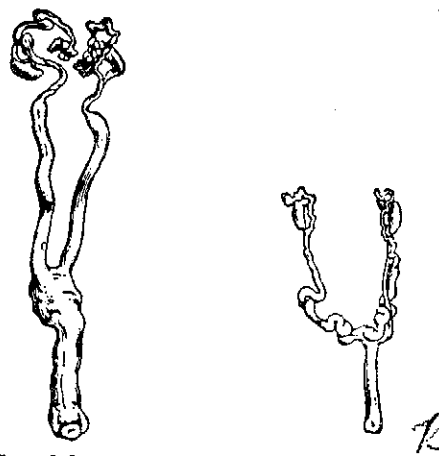

Fig. 13 Left: control. Right: after excision of inferior turbinate

Koblank also investigated the relation between the lower turbinate of the nose and the reproductive organs of rabbits and dogs. He found that if the lower turbinate was excised in young animals that the uterus, fallopian tubes, ovary or testicle failed to develop, even though the adult animal attained the same weight as an unoperated control. The failure of development showed itself both as a considerable reduction in size (Fig. 13) and histologically.

Koblank, Röder and Bickel experimented with dogs who had a Pavlov type exteriorised blind loop, whereby changes in gastric secretion and motility could be observed directly. They found

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THE
TREATMENT
OF DISEASE
by

ACUPUNCTURE

Part I FUNCTION OF ACUPUNCTURE POINTS
Part II TREATMENT OF DISEASES

by FELIX MANN

MB, B.Chir. (*Cambridge*)
LMCC
Founder of The Medical Acupuncture Society

Based on the case histories and clinical experience of Dr Felix Mann, with translations from the Chinese by David Owen, Frank Liu and Felix Mann

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Periosteal Acupuncture

Over the past nine years I have evolved an acupuncture technique which I have christened periosteal acupuncture. It is particularly efficacious in diseases of the joints.

The technique is simple, though in some instances it requires a good knowledge of anatomy. An acupuncture or hypodermic needle is used. The needle at the appropriate place, pierces the soft tissue surrounding the joint and then stimulates the periosteum. The periosteum is 'pecked', much as a woodpecker pecks a tree, till the required degree of stimulation has been achieved.

If mild stimulation is required I use a 30 or 28-gauge stainless steel acupuncture needle and 'peck' only lightly for a short time. When stronger stimulation is appropriate a 25, 23, 21, or even 19-gauge disposable hypodermic needle may be used. The hypodermic needles being hollow are more rigid than acupuncture needles so that the 'pecking' may be done with considerable force, sometimes bending the tip of the needle. If one expects the procedure to be unduly painful (which is rare except with a calcaneal spur or occasionally with the greater trochanter or lateral epicondyle of the humerus) a local anaesthetic may be used. I use 2% xylocaine without adrenaline, injected at the surface of the periosteum. 1 cc or less is sufficient and after a delay of about a minute the more violent type of 'pecking' may commence.

In a patient who has say cervical osteoarthritis with resultant brachial neuralgia, a needle stimulating the transverse process of a lower cervical vertebra, will in the appropriate case alleviate the symptoms. If the needle does not stimulate the periosteum, but instead stimulates the overlying skin or muscles, or hits one of the nerves of the brachial plexus (producing a

shooting pain down the arm), the result is in most instances not so good. I have repeatedly stimulated the skin, muscle, or a major nerve trunk over a joint and found it as a rule not as effective as when the periosteum is stimulated in the correct place.

It is well known that there are more nerve fibres and endings in the skin and periosteum than in most other tissues and hence a needle piercing the skin or periosteum hurts more than when passing through the intervening subcutaneous tissue or muscles. I assume there is a local nerve network in the periosteum surrounding the joints and innervating their structures. And I also assume that the nerves in the muscles and skin only communicate with the periosteal nerve network somewhat sparsely. This theory could explain why stimulating the periosteum of joints has a greater effect than pricking the skin. On the other hand, if a disease does not involve a joint, stimulating the skin or periosteum have an equal effect for an equal strength of stimulation.

I would be interested to hear of any histological or physiological research that has been done concerning the above theory.

Whether or not the conditions mentioned below respond, depends mainly on the degree and reversibility of the pathological changes. Although the intra-articular bone rarely regenerates, the positions of the bones relative to one another may be altered by varying the pull of the attached muscles, and hence alleviate temporarily or even permanently the patient's symptoms.

TRANSVERSE PROCESS OF LOWER CERVICAL VERTEBRAE (near Si16)

There are many patients who have pain at the back of the neck, in the occipital area, over the shoulders and down the arms to the fingers. There may be limitation of movement of the neck with crepitus.

A fairly high proportion of these patients may be helped, often even considerably, provided the main symptom is pain. When there are more

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* The books I refer to continuously
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Munich-Berlin). Eduard Pernkopf,
Anatomy', W. B. Saunders Co., Phil
Munich-Berlin). 'Gray's Anatomy', I