ACUPUNCTURE AN AESTHESIA

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Acupuncture Anaesthesía

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Publisher's Note

CHINA'S medical and scientific workers have created acupuncture anaesthesia by applying modern scientific knowledge and methods, summing up and improving on the experience of traditional Chinese medicine in stopping pain and curing ailments with needling.

The creation of acupuncture anaesthesia is an example of the good results which come from carrying out Chairman Mao's instruction on combining Chinese and Western medicine and taking China's own road in the development of medicine. It is a great victory for Chairman Mao's proletarian line in health work and scientific research.

Acupuncture anaesthesia is still in the process of development. Many medical units in China's cities and rural areas and the People's Liberation Army are applying this new technique in operations, studying its theoretical principles and, on the basis of practice, continually analysing and summarizing in order to perfect it.

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Scientists of the Physiological Research Institute of the East China Branch of the Chinese Academy of Sciences and medical workers of the Shanghai No. I People's Hospital experiment with needling on their own bodies to test the degree of pain, find new points for effective needling and new methods of stimulation. Their aim is to improve acupuncture anaesthesia and enlarge its scope.

Acupuncture anaesthesia being used in the removal of the greater part of a patient's stomach at Peking Medical College's Third Teaching Hospital where remarkable successes in acupuncture anaesthesia research have been made.



This patient undergoing a pneumonectomy at the Peking Tuberculosis Research Institute was anaesthetized with only one needle.





Before an operation surgeons at the People's Liberation Army General Hospital try the needles on their own bodies in order to find the best points and perfect their skill. Acupuncture anaesthesia is used extensively at the hospital.

Acupuncture anaesthesia used in the removal of a cerebral tumour at the Tungfanghung Hospital, Peking.

Needles being inserted into a patient's feet in preparation for an operation to remove his gall bladder.

A patient's ear is needled to produce anaesthesia for gastrectomy.

China Creates Acupuncture Anaesthesia

RESPONDING to our great leader Chairman Mao's call "Chinese medicine and pharmacology are a great treasure-house; efforts should be made to explore them and raise them to a higher level", China's medical and scientific workers have created acupuncture anaesthesia - a unique Chinese anaesthetizing technique. They have achieved this by combining revolutionary zeal with a scientific approach, applying modern scientific knowledge and methods, and summing up and improving on the experience of traditional Chinese medicine in stopping pain and curing ailments with needling. Using acupuncture instead of anaesthetics to induce analgesia is a breakthrough in surgical anaesthetization. It is a tremendous contribution to the development of medical science and a brilliant example of how Chinese medical workers have firmly carried out Chairman Mao's instruction on combining Chinese with Western medicine and taking China's own road of developing medicine.

Ι

Administering acupuncture anaesthesia involves inserting one or more needles into certain points of a





patient's limbs, ears, nose or face. Analgesia follows after a period of inducement and stimulation, thereby ensuring safe operations on the head, chest, abdomen or limbs. This new method is being used in many civilian and army hospitals and clinics in the cities and rural areas throughout the country. More than 400,000 patients have received acupuncture anaesthesia for surgical operations, including children and people in their eighties. The rate of success is around 90 per cent.

Anaesthetization by acupuncture does not need complicated apparatus; it is applicable regardless of equipment, climate and geographical conditions. It can therefore be widely popularized in the cities and is particularly suitable to mountainous and rural areas and under war conditions.

Patients are fully conscious during operations when this kind of anaesthetization is used. Apart from being dulled or insensitive to pain, they are normal in other physiological functions. During operations, therefore, they can give play to their subjective dynamic role, constantly strengthen their confidence in overcoming the diseases, and respond to the surgeons as the latter require, enabling speedy and successful operations.

When an anaesthetic is administered for an operation to correct squinting, success or failure is known only after the effects of the drug wear off. But when anaesthetization is done by acupuncture, the patient's eyeballs can move normally so that the doctor can ascertain the result of the operation then and there.

Applying acupuncture anaesthesia in thyroidectomy, the surgeon can freely talk to the patient to determine the condition of vocalization so as to avoid inadvertently damaging the nerves controlling the vocal functions. When performing a heart operation or pneumonectomy with this anaesthetization, the doctor can ask the patient to do abdominal breathing so as to facilitate the operation. In orthopedic operations, such as plastic surgery of finger muscles and tendons, it makes possible the patient's retaining the functions of his fingers and moving them as usual. This, coupled with the patient's active co-operation, helps the doctor find the injured muscles and tendons easily. And after the operation, the patient can immediately move his fingers to test the results.

Anaesthetization by acupuncture helps prevent disorder in the patient's physiological functions during the operation and, after its completion, avoid harmful effects from the use of anaesthetics. Moreover, needling can set in motion and strengthen the patient's positive factors to resist diseases and can regulate the functions of organisms. As a result, the patient's blood pressure. pulse and breathing in general remain normal during the operation. Incisions heal and functions of the organisms concerned are restored quickly and satisfactorily after the operation, and consequently the patient can move about and take food early. In the case of patients who suffer from poor functioning of liver, kidneys or lungs, high blood pressure, debility from serious disease, shock or are over-sensitive to anaesthetics, anaesthetization by drugs is not advisable, while acupuncture anaesthesia ensures safe operations.

Clinical practice has abundantly proved that this new method is safe, simple, economical and effective.

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II

The working people of China began to cure ailments and diseases by needling several thousand years ago. From then to the introduction of acupuncture anaesthesia represents a leap in the history of acupuncture in China and adds new splendour to China's time-honoured medicine and pharmacology.

The new method came into being and developed in the sharp struggle between the two lines. Its success is a great victory for Chairman Mao's proletarian revolutionary line in health work and scientific research.

Acting in accordance with Chairman Mao's teaching to carry forward and develop the legacy of Chinese medicine, doctors trained in Western medicine began to study and learn from traditional Chinese medicine in 1958. Combining Chinese and Western medicine, they began using Chinese medicines and drugs and acupuncture on a wide scale to cure diseases. In clinical practice, medical workers in the cities of Sian and Shanghai and in Shansi and Hopei provinces and other places experimented on using acupuncture anaesthesia in operations, such as thyroidectomy and removing tonsils. Their initial success paved the way for subsequent extensive use.

The throat of a patient in the No. 1 People's Hospital in Shanghai was so painful he could not swallow anything after he had his tonsils out. Medical personnel in the otolaryngology department inserted a needle at the *hoku* point and the pain stopped immediately. The patient then ate a bowl of meat dumplings without difficulty. This was an eye-opener for the medical workers who thought that if needling could stop the pain, it might also be used to replace anaesthetics in tonsil operations.

Determined to open a new trail, they repeatedly inserted needles into the *hoku* and *neiting* points to ascertain the degree of pain. When these experiments proved that needling in this way was very effective in stopping pain, they boldly applied it to actual operations.

Later, the Liuchow Tuberculosis Hospital in Kwangsi and the No. 1 Tuberculosis Central Hospital in Shanghai and other hospitals succeeded in using acupuncture anaesthesia for pneumonectomy, thereby creating experience for applying this method to major operations.

"New things always have to experience difficulties and setbacks as they grow."

No sooner had acupuncture anaesthesia appeared than it was suppressed by Liu Shao-chi's counter-revolutionary revisionist line and attacked by bourgeois "experts". In a vain attempt to nip it in the bud, they raved that it was "not scientific", "without any practical value" and a "retrogression" in the history of anaesthesia.

Repeatedly studying Chairman Mao's teaching "We cannot just take the beaten track traversed by other countries in the development of technology and trail behind them at a snail's pace", the medical workers made up their minds to break new ground for anesthesiology. Disregarding ridicule and attacks, they persisted in accumulating experience through clinical practice and constantly raising the efficacy and widening the scope of applying acupuncture anaesthesia in operations.

The Great Proletarian Cultural Revolution swept away the bourgeois trash, and revolutionary medical

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workers relentlessly criticized Liu Shao-chi's counterrevolutionary revisionist line in health work and scientific research. This facilitated great development and improvement in acupuncture anaesthesia.

Since the Great Proletarian Cultural Revolution, more than 400,000 operations have been performed with acupuncture anaesthesia, as against less than 10,000 in the previous eight years. It is now used in nine out of ten hospitals in Shanghai that have surgical departments. Using this method, the Worker-Peasant-Soldier Hospital attached to the Shanghai No. 2 Medical College has considerably reduced the mortality rate after brain surgery, where 90 per cent of these operations are done with acupuncture anaesthesia. A few years ago, analgesia was induced only by needling the body and ears. Now this has been extended to the face and nose, following discoveries by medical personnel through practice, with needling done either by hand or electricity; in some cases analgesia is induced by injections of distilled water at certain points.

Previously, a patient undergoing a pneumonectomy had to be needled at several dozen or even more than 100 points on his limbs, and four medical workers had to attend to the work of manipulating the needles without let-up. During the Great Cultural Revolution, medical workers at the P.L.A. Kwangchow Units Central Hospital, the Peking Tuberculosis Research Institute, the No. 1 Tuberculosis Central Hospital in Shanghai and other hospitals conscientiously studied Chairman Mao's philosophical works to guide their practice. Boldly experimenting on themselves with needles to determine the degree of pain, they eliminated the unnecessary points and, by grasping the main contradiction and bringing into play the role of the main points, succeeded in reducing the needles to a few and sometimes even to one. Thus, by needling only a few important points, the effects of anaesthesia were greatly improved. The Peking Tuberculosis Research Institute recently achieved complete success in anaesthetization with only one needle in more than 90 thoracic operations.

Acupuncture anaesthesia still has some imperfections. For instance, at certain stages in some operations, patients still feel some pain, and some feel uncomfortable when the internal organs are pulled. Chinese medical and scientific workers are making still greater efforts in studying Marxism-Leninism-Mao Tsetung Thought and are using dialectical materialism to guide their medical work and scientific research. Daring in practice and in breaking new ground, they are bending their efforts to perfect acupuncture anaesthesia.

A Small Needle Works Wonders

I

IN a spacious and brightly lit operating-room, medical workers of the Peking Worker-Peasant-Soldier Hospital and the Peking Tuberculosis Research Institute were performing a thoracoplasty on Hu Shu-hsuan, a patient suffering from pyothorax.

There was no complicated anaesthetization apparatus, nor any odour of anaesthetics. The medical personnel simply applied two needles on Hu's ears and twisted them lightly for some 20 minutes. The operation then commenced, with the patient fully conscious.

The patient's pyothorax was the result of infection after an operation five years earlier. Pus and blood oozed out through a fistula in his chest all the year round. An operation was required to clear out the pus and obliterate the cavity. However, Hu Shu-hsuan was weak, his heart and lungs functioned poorly and he obviously could not stand the effects of anaesthetic drugs. On several previous occasions, general anaesthesia had caused cardiac failure which endangered his life. Later, spinal anaesthesia and local anaesthesia were applied instead. But these also failed to ease the pain and the operations proved unsatisfactory. Having undergone 24 unsuccessful minor and major operations in all, he had become weaker and weaker.

In this latest operation with acupuncture anaesthesia, skin consisting almost entirely of scar tissue had to be removed; in addition, six ribs had to be resected. bone that had grown following each earlier operation removed and the pus and infected part in the cavity cleared out. The difficulties involved and the effects of the operation on the patient were far greater than before. But throughout the two-and-a-half-hour operation, the patient was calm and in good spirits, and his blood pressure and pulse remained steady. The sound of his ribs being cut did not upset him. At the beginning, he only felt a scratch on his body but no pain at all when the surgeon was excising his scar-covered skin. While cutting his ribs with sure, precise, light and quick strokes, the surgeon gently told him: "Just tell us if you feel uncomfortable." "I'm all right," replied Hu. "There's no pain at all. Go ahead."

The medical workers cleared out the pus thoroughly, removed the fistula and closed the cavity. The operation was highly successful. As soon as the surgeon finished dressing the wound, the smiling Hu Shu-hsuan sat up on the operating-table and, facing a portrait of Chairman Mao, cheered: "Long live Chairman Mao! A long, long life to Chairman Mao!"

After each previous operation, he had been in a daze for days from the effects of the anaesthetics. His pulse was rapid and breathing was difficult; he had no appetite and slept badly. Several times he almost choked to

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death because of the phlegm that had accumulated in his throat after the operation. The surgeon had to cut open the trachea and give him oxygen to save his life. Previously, recuperation was slow and it was three weeks after each operation before he could get out of bed and walk. This time, however, anaesthetization by acupuncture made things different. After the operation, he was calm as usual, his breathing was normal and there was little phlegm. He could get out of bed and walk about.

\mathbf{II}

Tsao Hung-tan, a patient with severe multiple fractures, was wheeled into the operating-room of Chaoyang Hospital in Peking. A reduction of the femoral fracture with anaesthetization by acupuncture was about to begin.

A member of the Tsaitun Commune in Miyun County on Peking's outskirts, the patient had in an accident sustained fractures of his right upper arm, right thigh and leg, several right ribs and lumbar vertebrae, as well as the pelvis. On arriving at the hospital, he was pale and his limbs cold; his systolic pressure had dropped to 50 mm. H., while his diastolic pressure was indeterminable. He was in a state of severe shock. He came to after emergency treatment, but reduction of the fractures presented a complicated problem.

The comminuted fracture in the patient's right thigh called for an incision in order to perform the reduction. But the injury was very serious, and there had been considerable loss of blood. Moreover, he had just come out of shock and was very weak. Four ribs were fractured, and the pain affected his breathing, making it difficult to cough up phlegm. General anaesthesia by drugs could easily cause pulmonary complications and unforeseen danger. The surgeons decided to do the operation with acupuncture anaesthesia.

After slowly and carefully inserting two needles into two points on the patient's left ear, the anaesthetist inserted two other needles into the right ear, and one each on the hip and the abdomen, and connected them with wires to a small electrical apparatus for anaesthetization. When the current was turned on, the patient became numb, heavy and distended in the region where the needles were, as in the case where needles are manipulated by hand. The operation began 20 minutes later.

Throughout the operation which lasted more than an hour the patient remained calm, and his blood pressure and pulse were normal. Only when the fractured bones were reduced did he feel somewhat uncomfortable because of muscle traction. But this feeling soon disappeared after the frequency of the electric needles was increased and the surgeon told him to breathe deeply and relax his muscles.

Back in the ward after the operation, Tsao Hung-tan could eat and drink without difficulty. While recuperating, he showed no signs of agitation common to patients after operations performed with anaesthesia by drugs, thus preventing possible bad effects on other fractured parts. The health centre of the Lochia Commune in Kiangsi Province's Nanchang County has very simple equipment. Most of its staff are "barefoot doctors" (medical trainees from among the peasants who do medical and health work in addition to their regular job in production) selected from various production brigades. They mastered anaesthetization by acupuncture after a short period of training.

At the end of last year, the doctors there used acupuncture anaesthesia to perform a gastrectomy on 55-year-old poor peasant Wan Ting-li who had a gastric ulcer. A few needles were inserted into the patient's ears while he lay quietly on the operating-table. A young surgeon, Wan Tao-keng, opened the abdomen and, after examining it carefully, found an adhesion of the ulcerous part to the posterior abdominal wall. Together with his assistants, the surgeon carefully separated it, performed the subtotal gastrectomy without incident and then joined up the stomach and intestine. During the operation which lasted two hours and 45 minutes, the patient was calm, with normal breathing and pulse. He felt somewhat uncomfortable only when separation of the duodenal bulb caused visceral traction. At that point, the surgeon told him to do deep breathing, which immediately made him feel better. After the operation, he put on his clothes, got off the operating-table and walked back to the ward.

Nine days later, he left the hospital. After three months of recuperation, he had regained his health and

was able to take part in transplanting rice seedlings, harvesting and other work.

Safe, effective, simple and *e*conomical, acupuncture anaesthesia has created extremely favourable conditions for operations in the countryside.

The Lochia Commune health centre is now able to use acupuncture anaesthesia by needling the body, ears and nose to perform more than 20 kinds of minor and medium operations, and the rate of success is over 90 per cent.

Acupuncture Anaesthesia in Brain Surgery

by Hui Wen

WE went one morning to observe a brain operation using acupuncture anaesthesia, at the Worker-Peasant Soldier Hospital attached to the Shanghai No. 2 Medical College. When we entered the operating-room in sterile gowns, caps and masks, the patient, a 38-year-old worker named Liu Wen-chang, was lying calmly on the operating-table, draped with a white sheet. He was to have an operation for brain tumour on the left side. The tumour was growing, and if not removed would cause general paralysis and eventually the patient's death. A growth in the right of the head usually causes paralysis of the left hand and foot, and vice versa. But Liu Wen-chang's case was quite different. Six months before he had a convulsion and since then progressive loss of muscle tone of the left arm and leg, until his left hand and foot were almost totally paralysed.

But the operating team was confident. "We're sure the operation will be successful and the patient safe," said the surgeon.

Anaesthetization began at 9:15, when the anaesthetist, instead of using the complicated anaesthesia apparatus in a corner of the room, applied several needles to the patient's left ear. The patient counted, "One, two . . ." and

at the fourth, said, "There's one more." We wondered how the patient knew how many needles had to be inserted until we learned that before the operation the medical workers had explained the whole process of the operation to the patient, and told him the problems that might arise, so that he could co-operate consciously with the team. When all five needles were in position, they were connected with fine wires to a transistor which vibrated them rhythmically (several hundred times per minute), instead of twisting them by hand. After some minutes the anaesthetist said, "Now we'll step up the stimulation to produce a feeling of combined soreness, swelling, heaviness and numbness." When the patient feels these in the part to be operated, the anaesthesia has taken effect.

It was 9:50. The chief surgeon went to the operatingtable while the anaesthetist increased the stimulation to the needles for most effective anaesthesia.

The surgeon swiftly made an incision 96 sq. cm. in area on the patient's scalp. As the scalp is most sensitive, cutting it would ordinarily be excruciatingly painful, and this was a major test of the analgesic effects of acupuncture anaesthesia. The patient remained calm and obviously felt no pain. We asked him how he felt.

"All right," he smiled. "Only a little sore in my scalp and stomach. I'm sleepy."

A nurse brought him a cup of iced water. He took a few sips and lay back quietly on the operating-table. At 10:05, with the incision in the scalp completed, the surgeon called for a hand-drill and said, "Old Liu, we're going to drill into your skull. Don't be afraid." "I'm not afraid. Go ahead."

After drilling the first hole in the patient's skull the surgeon asked him if he felt uncomfortable.

"I'm all right. Can I move my legs a little?"

"You can," said the surgeon.

In ten minutes five holes were drilled in the patient's skull. Then with a saw that looked like a silver thread he opened the skull, exposing the cerebral membrane criss-crossed with blood vessels and nerves.

At 10:30 the battle to locate the tumour in the cerebral tissues began. The surgeon carefully separated the cerebral membrane and quickly found the tumour among the other tissues. The patient remained calm while this was being done. At this stage of the operation the requirement for analgesia was less, so the frequency of needle vibration was reduced. The task now was for the surgeon to work carefully and ensure safety.

The atmosphere was tense, as each member of the operating team concentrated on doing his job conscientiously. The team member in charge of blood transfusion saw that blood dripped steadily into the patient's body, and another kept close tab on his blood pressure and pulse. The chief surgeon and his two assistants began removing the tumour bit by bit with forceps.

At 10:40, when the operation was well under way, the patient was suddenly dazed and seized with convulsions so violent that the operating-table shook. Emergency acupuncture and sedatives were administered and the convulsions and coma ceased. It was 10:50. The patient said he felt cold, and the nurse spread a coverlet over him.

The surgeon told us that such convulsions, which sometimes occur in brain surgery, were not caused by the needling but by pulling on the cerebral cortex in the motor area in the course of removing the tumour.

As the seconds ticked by, the surgeon extracted the tumour bit by bit from deep inside the skull. When light from the shadowless lamp failed to penetrate to such depth, a stand lamp was used.

"The tumour has spread to the right," the chief surgeon stood up and said.

At 12:50 the entire tumour had been removed. The surgeon asked the patient first to move his right leg and then the left. He did this satisfactorily. Then the surgeon stretched out one finger and the patient said he could see it clearly.

"He's all right," the surgeon said. "None of his organic functions is affected and there's no bleeding. We can suture the wound now."

The anaesthetist increased the stimulation to the needles. "Sewing up the scalp is more painful than cutting into it. We've had patients who couldn't stand it," he explained. "Nerves have the property of inertia, and continuous strong stimulation may result in diminished analgesia at the latter stage of an operation. We reduced stimulation mid-way of the operation so that we could use a strong stimulation now and induce better analgesia." There was a lot of dialectics in this!

After checking instruments and cotton sponges, the wound was closed, first the cerebral membrane, then the skull bone and finally the scalp.

The patient was in fine spirits at 13:40. The operation was over. It had been done with the patient conscious. He felt no pain though his five senses were functioning. It seemed wonderful that a few slender needles had produced the anaesthesia!

In the past, when brain surgery was done with general anaesthetics, the patient was left unconscious at the end of the operation. Some regained consciousness only several days later. Whether an accident had occurred in anaesthesia or in the operation was often not known to the surgeons themselves. Infections of the respiratory tract, pneumonia and other complications often followed inhalation anaesthetization. Acupuncture anaesthesia prevents these complications which often resulted in the brain surgery patient's death.

The surgeon's ability with acupuncture anaesthesia to continue the operation safely when the patient Liu Wen-chang had a sudden attack of convulsions reminded us of the struggle that took place when this method of anaesthetization was first introduced in neurosurgery. In a vain attempt to nip it in the bud, the exponents of Liu Shao-chi's counter-revolutionary revisionist line in health work raved that acupuncture was a "step backward in anesthesiology", that it might be used in minor operations but not in major ones. When facts proved otherwise they challenged, "Can you cut the head open with it?" They didn't believe it was possible to apply acupuncture anaesthesia in brain surgery, itself a new

branch of China's medical science. This patient's skull had been opened and an extensive tumour removed. Moreover, with acupuncture anaesthesia brain surgeons have performed operations of the third ventricle with success. With acupuncture anaesthesia they have also undertaken with success a thalamencephalic operation, said to be a forbidden zone by Western medical scientists. Bourgeois "specialists" maintained that convulsions interdicted the use of acupuncture anaesthesia, and that the death rate of patients so seized during the operation was bound to be high. These medical workers, however, armed with Mao Tsetung Thought and with indomitable revolutionary spirit, have opened another "forbidden zone" in brain surgery. After such an operation, Liu Wen-chang has regained his health and returned to work in his factory.

The Development of Acupuncture in China

by Fu Wei-kang

CHAIRMAN MAO says, "Chinese medicine and pharmacology are a great treasure-house, and efforts should be made to explore them and raise them to a higher level." Acupuncture is one of the legacies in the treasure-house of Chinese medicine, a method of treatment highly appreciated by the working people because it is safe and simple, widely applicable, gives quick results and costs practically nothing. For several thousand years it has played an important role in curing diseases and protecting the health of the Chinese people. It became known to other countries in very early times.

In primitive society before metallurgy was known, acupuncture was administered with a piece of sharp stone called *pien*. According to *Shuo Wen Chieh Tzu* (A Dictionary of Characters) compiled during the Han Dynasty (206 B.C.-A.D. 220), "*pien* means the curing of diseases by pricking with a stone". A cure was effected by pressing or pricking a certain section of the body. This was acupuncture in the early stages of its development. As social production developed, the *pien* was replaced first by needles made of stone, bone or bamboo, and later when metals were discovered, by copper, iron and silver needles. Today, acupuncture is done with fine needles of stainless steel.

The earliest record of an effective cure of a typical case by acupuncture is found in the "Biographies of Pien Chueh and Tsang Kung" in *Shih Chi* (*Historical Records*) written 2,000 years ago. The book recorded that Pien Chueh of the Warring States period (475-221 B.C.) applied acupuncture to revive a dying patient already in coma.

The Nei Ching (Book of Internal Medicine), the earliest extant medical classic in China and a summingup of Chinese medicine before the Chin and Han dynasties, has a special section entitled Ling Shu which deals at length with the "channels" and "points" on the body, needles and ways of applying them, diseases and ailments curable by acupuncture, as well as prohibitions. Ling Shu later became known as the Book of Acupuncture.

The use of acupuncture to relieve pain has long proved to be a quick remedy. The *Book of Internal Medicine* describes a variety of pains that can be allayed by this method, pains in the head, ear, tooth, back, stomach, abdomen and the joints. The chapter on the "Treatment of Back Pains by Needling" deals with the pathology, symptoms and treatment of various back pains by acupuncture. The chapter on "Muscles and Tendons" in the book *Ling Shu* emphasizes "treating the pain by applying the needle at the spot", that is, a method of direct insertion.

During the Tsin Dynasty (A.D. 265-420) acupuncture was fairly comprehensively summed up in the Chen Chiu Chia Yi Ching (An Introduction to Acupuncture and

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Moxibustion) which for the first time defined 349 basic acupuncture points and listed 649 such points on the human body. The book discusses the theory of acupuncture, location of the points, manipulation of the needles and prohibitions. It is the earliest extant work which specially treats acupuncture. It exerted a great influence both in China and abroad in the 1,000 years and more after its compilation.

In the Tang Dynasty (618-907) a special acupuncture department was set up in the Imperial Medical College, China's earliest medical school.

In the Sung Dynasty (960-1279) acupuncture was again fairly extensively summarized and systematized. The Tung Jen Shu Hsueh Chen Chiu Tu Ching (Illustrated Manual on the Points for Acupuncture and Moxibustion as Found on the Bronze Figure) published in 1026 verified the names of 354 basic points and marked out a total of 657 such points on the human body. It discusses in great detail the various acupuncture points and their functions, clarifying those points and functions which had previously been confused. Two bronze figures marked with the location of the points were cast in 1027 for use in teaching and examinations. They are the oldest medical teaching models yet found in China.

During the Ming Dynasty (1368-1644) the previous achievements of acupuncture were summarized in the *Chen Chiu Ta Cheng* (*Compendium of Acupuncture and Moxibustion*) which handed down to posterity many valuable and effective methods practised in ancient times. The *Compendium* was widely circulated in the 300 years after the 17th century. It was also studied abroad. The Ching Dynasty (1644-1911), however, discriminated against acupuncture. A Ching government decree issued in 1822 banned its practice. The development of this branch of Chinese medicine was stifled.

During the Kuomintang days, the reactionary ruling class, submitting everywhere to imperialism, exerted great efforts to enforce an enslaving education. In 1929 the Kuomintang government banned the practice of Chinese medicine altogether. The decree dealt a considerable blow to acupuncture. Nevertheless, since acupuncture is safe, simple and effective, the ban was largely ignored among the ordinary people.

Chairman Mao has always attached great importance to traditional Chinese medicine and pharmacology. In his article "The Struggle in the Chingkang Mountains" he instructed the Red Army hospitals in the mountains to "give both Chinese and Western treatment" to the Red Army and the people in the revolutionary bases. In October 1944, at the Conference of the Shensi-Kansu-Ningsia Border Region Cultural and Educational Workers held in Yenan, he called on the doctors and veterinary surgeons of both Chinese and Western medicine to strengthen their unity, raise their level together and work hard to treat and prevent diseases in men and animals in the border region. An acupuncture clinic was set up at the Peace Hospital in Yenan in April 1945. It cured a great number of patients and made acupuncture very popular among the people.

In the War of Liberation, acupuncture training classes were run in the liberated areas. Medical workers of the People's Liberation Army applied this method in

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the treatment of dozens of diseases including malaria, dysentery, enteritis, infections of the respiratory tract and arthritis, successfully curing large numbers of patients and effectively supporting the War of Liberation.

Since the founding of the People's Republic of China in 1949, the Communist Party and Chairman Mao have established a series of correct policies concerning Chinese medicine. Chinese medicine has been carried forward and developed. Acupuncture has made tremendous advances. Research institutions in acupuncture have been established in Peking and many cities and provinces.

During the Great Leap Forward in 1958, Chairman Mao's instructions gave fresh impetus to the enthusiasm of medical workers. This found expression in an upsurge to learn from traditional Chinese medicine and combine Chinese and Western medicine in curing diseases. There was a vigorous mass movement to learn and popularize acupuncture.

Many different methods of treatment by acupuncture were developed and popularized, such as needling the fingers, nose, ears, face; acupuncture with long, extrafine needles, hot needles, warm needles, needles activated by electricity, "plum-blossom" and "seven-star" needles and the "barefoot doctor needle" (a long, thick needle); and the injection of distilled water into certain points. An instrument for determining the location of the "channels" and a glass figure marked with acupuncture points were made.

Since pain could be stopped by inserting needles into certain points of the human body, medical workers at first applied acupuncture to alleviate post-operation pain and achieved satisfactory results. This gave rise to the question: "If needling can stop pain, can it also produce anaesthesia for operations?" With doctors of Chinese and Western medicine working together, they first applied acupuncture to induce anaesthesia in dental operations and succeeded. Soon they were applying it in the removal of tonsils, thyroidectomy and herniotomy. The new method of anaesthetization by acupuncture was thus created. From 1959, Chinese medical workers began to use acupuncture anaesthesia in operations on the neck and limbs, in the chest and abdominal cavities, and for pneumonectomies and the removal of cerebral tumours.

In the Cultural Revolution acupuncture made another leap. Some points on the human body which have been proved incorrect in practice have been corrected. New discoveries have been made as to the functions of some points. Needles are now inserted in areas, points and depth regarded as prohibitive to acupuncture in the past. In addition, some new points have been discovered.

Continuous practice in the past few years has introduced an increasing number of new methods of anaesthetization by acupuncture. In addition to needling only the body as in the past, anaesthesia is now produced by inserting the needle into points on the ears, face, nose, fingers, feet, back of the ears or tongue, by inserting the "barefoot doctor needle", by injecting distilled water or simply by pressing a point with a finger. These new methods are good because only a few selected points are needled to produce the same effect, and the few needles can be easily manipulated with greater safety. As a result, operations can be more conveniently carried out. Anaesthesia by injection of distilled water into certain points has eliminated the shortcoming resulting from the uneven manipulation of the needle by the anaesthetist. Finger-pressing anaesthesia is a good method to use with children who have to have dental work.

Acupuncture anaesthesia is now used extensively in China in a great number of medical establishments, for people of all ages, from very young babies to people above eighty. It is being used successfully in head, chest, abdominal surgery and 200 other kinds of major and minor operations, in both mild and serious cases.

中国的針刺麻醉 *

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