The first rehabilitation technique: acupuncture.

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Abstract

Acupuncture (from Latin, acus (needle) and punctura (to puncture) is a form of alternative medicine and a key component of traditional Chinese medicine (TCM) involving thin needles being inserted into the body. TCM theory and practice are not based upon scientific knowledge, and acupuncture is commonly described as pseudoscience. There is a diverse range of acupuncture theories, involving different philosophies. Techniques vary depending on the country. The method used in TCM is likely the most widespread in the US. It is most often used for pain relief, though it is also used for a wide range of other conditions. It is generally only used in combination with other forms of treatment. In this paper we reported the history of acupuncture.

Keyword: History, acupuncture, Chinese medicine.
Introduction

The first rehabilitation method undoubtedly came from orthopedics. It comes from the East by China, many millennia before the birth of the Europe of Western medicine. This method based on nerve stimulation through the bite is undoubtedly one of the most effective therapies for the treatment of pain disorders locomotor apparatus. In addition, the Chinese were involved in a fervid

Acupuncture the mainstay of Chinese Medicine

From the Neolithic, Chinese society experienced a rapid development in all areas, variously characterized culturally, according to the different typical natural elements of the settlement areas. In the course of a relatively long process, the cultures of the different areas came into contact and fused with each other. In the late Neolithic, there appeared on a large scale the trend towards a gradual uniformity, which laid the foundation for the subsequent formation of the ancient Chinese civilization, a unitary character.

According to ancient written tradition, approximately around the twenty-first century BC, the Xia, active in the middle reaches of the Yellow River, founded the first dynasty in Chinese history that would last roughly five centuries, it also traces the origin Chinese medicine. Only through some legends we know that the Yellow Emperor Huang Di was the father of the Chinese medical science, and that the emperor Shen Nong * was the first to deepen existing knowledge of pharmacology and dietetics through the study of the therapeutic virtues of a huge number of plants.

The Shang Dynasty is the second dynasty in Chinese history. He had a lifetime of about 600 years. In the first period of his government there were five movements of capital, up to the city of Yin which also determined the change of dynasty of the same name that became Shang Yin. Shang culture was, without a doubt, very much alive in all fields and is documented by numerous finds, among which are famous those that occurred in the early twentieth century near Dunhuang (Gansu Province) and Anyang (Henan province). Through these findings it could be established that at that time was practiced a shamanistic medicine, since they were just shamans to have dominion of all religious practices, divination, cultural and medical.

This primitive medicine was based on primordial criterion of conceiving both the state of health that the disease linked to evil influences that were removed through divination and witchcraft practices.

However, it is attested as early as the Shang period, the use of medicinal substances, ingested, or in the form of decoction or as fermented beverages, a practice which was to flank shamanic activity, gradually assuming a more and more original and autonomous role, until to differ totally from divination. It arrived so to an initial draft of a real medical theory, which led to more clearly define the origin of the disease, indicating three main causes:

- Those who came from the emperor of the high Shang Di, so celestial causes, which could act either directly or through the rain;
- Those which were determined by the influence of evil Gui, that the deceased;
- Those produced by parasites and insects.

A sketch of primitive etiology distinguish the presence of diseases caused by the wind, of diseases characterized by intermittent fever and epidemic diseases.
Human diseases were distinct from those of women and children and were divided according to the various parts of the body affected, following a sort of primitive anatomy. So by defining the disease extremity cephalic, eye, ear, teeth, abdomen, trunk and limbs.

They developed the first knowledge on the use of topical poultices and especially on therapies performed with stone "bian", from which comes the needle, which assumed an increasingly original role with the development of knowledge related to the theory and practice of acupuncture.

The symbolism that characterized the primitive shamanic practices, is also transmitted to the medicine, maintaining, without a doubt, its evocative power, which pervade even in later times the entire Chinese culture. Of course, in medicine, symbolism, which in shamanic practices had a magical-operative meaning, will take on a different character. It will become the means of expressing concretely assumptions or concepts, and will have the task of helping in the formulation of links and correlations of thought among the most diverse situations or conditions. In China during this period also it came the writing through the ideograms.

The years from 1123 BC to 221 BC They saw to power the dynasty Zhou. Since 1123 BC to 771 BC They ruled the Western Zhou which was followed until 221 BC the Eastern Zhou. Typically, the era that goes from 770 BC until 476 a. C., called the Springs and Autumns, and the subsequent period up to 221 BC It goes by the name of the Warring States.

With the advent of the Zhou Dynasty (1123-221 BC), the imperial power became more and more powerful and, in the era of the Springs and Autumns, you began to develop a real feudal system which will be consolidated in the third century BC under the power of the emperor Shi Huang - founder of the Qin Dynasty. It was he who gave the name to China and should be remembered for the biggest destruction of literary works of all time. It must, however, to him the consolidation of the Great Wall, the unification of weights and measures and the construction of an imperial road network.

At the cultural level, the Zhou era developed according to the saying, "that hundreds of flowers bloom, hundreds of schools they prevail." This cultural movement led to the appearance of the "Hundred Schools".

Among the main are:

- The Confucian School Juo or Dotti or literati;
- The Tao School or Taoist;
- School Fa or Legalista;
- The Yin or Yang School Naturalist;
- The Ming School or Names.

When the feudal power began to disintegrate, many decayed aristocrats at the level of ordinary people, because of the loss of the lands that before possessed. These nobles were scattered in the country and they became teachers by profession, since they were the only ones who had a chance to acculturate.
So, with the separation of teacher category from that of rulers, he was born the first draft of the reality that subsequently led to the establishment of schools of thought, which differed from each other because, previously, there were specialists in various branches of the know.

The comparison between the various Schools informed all speculative activities and outlined also the scientific systematization of early Chinese thought, including those related to medicine.

Schools were especially Taoist, Confucian and naturalist to conform the medical thinking according to their teachings. These close relations between medical science and philosophy have never stopped in China, as opposed to what happened in the West in the aftermath of the Renaissance and in the post-Cartesian. It must be said, however, that in all this religiosity is always lacked the idea of a supernatural God, for the Chinese culture has endorsed the theory that even the most important characters were always of human origin, not divine and that, only through their quality, they could reach the highest degree of hierarchy. The purpose of philosophy is now to bring the man to the wisdom, assuming that the wise man is one who identifies with the universe. The inner wisdom is the way and the spiritual education that everyone has to pursue, in accordance with the teachings of their school.

Of course, each school has differentiated itself from the other, both to the theoretical conceptions and practical implementation of the teachings, albeit from a common conception of the universe matured over the centuries, the result of speculation by many men. All schools were pursuing the same goal, namely achieving a "great peace" (tai ping), the result of cosmic balance.

While for the Taoists, the ethical ideal was that of not acting, because human intervention is not capable of changing the natural flow of life, Confucians, however, urged the active intervention. Taoism has always been a philosophy based on a kind of selfishness, not meant in a negative sense, destructive or even less conservative, but a form of selfishness that allows man to focus in achieving true happiness, limiting its interests and not intervening in the activities that surround it, making it a true hermit dedicated to asceticism.

Even in purely medical field, the Taoist school had a significant influence, especially trying to deepen the study of the techniques of health prevention and conservation and extension of life, to give man a chance to live peacefully and to complete duties assigned to him. Obviously, taoisti teachings about achieving harmony with the surrounding world, achieved by retrofitting of man to the natural laws, limiting any excess, both food and sexual and away the passions, were the basis for the formulation of early theories of massage, breathing, meditation known as "qi gong", a medical gymnastics widely used in China, even now.

The application of the Taoist principles to medicine he created the image of a "microcosm" man, modeled according to natural laws and inserted in the macrocosm which must be balanced, and, at the same time, a "macrocosm" Man, formed by a set microcosms that, kept in harmony with each other, guarantee the health status.

The correspondence between the macrocosm and the man goes so far as to conceive of the human body as a kind of interior landscape that conforms to the outer. There will be so, the seas, the rivers, the mountains, the sun, the moon, who will give the name, in a very poetic and symbolic, in various anatomical areas of the body corresponding to them and to the same acupuncture points.

Confucian doctrine, however, unlike the Taoist, argued that man can fully realize himself only devoting himself actively in society and fulfilling the obligations imposed on him by his precise social position.

According to Confucius (551-479 BC), who is considered the greatest exponent of this school of thought, based on ethical and moral principles, which is Confucianism, he had diligently devoted to the study of the classics and then the traditions, because only the example and the lessons of history, you could come to fully understand their duties, so to get to a society based on the principles of order and peace. On this basis, Taoist and Confucian forms acupuncture
history. Acupuncture treats the human body as a whole that involves several "functional systems" that would in many cases be associated with approximately physical organs. Some of these functional systems such as the San Jiao have however not corresponding physical organs. The disease is interpreted as the loss of homeostasis between the various functional systems, and the treatment of the same is attempted by modifying the activity of one or more of these systems, by means of the action of the needles, pressure, heat, etc. in sensitive parts and small size of the body of said acupuncture points or xue, blood in Chinese.

So there are twelve main channels, called meridians, that run vertically, bilaterally and symmetrically; every channel corresponds to and connects internally with one of the twelve zang fu ("organs"). It means that there are six yin and six yang channels; There are three yin and three yang channels on each arm, and three yin and three yang on each leg.

The three yin channels of the hand (lung, pericardium and heart) begin on the chest and travel along the inner surface (mostly the anterior portion) of the arm to the hand.

The three yang channels of the hand (Large Intestine, San Jiao, and Small Intestine) begin on the hand and travel along the outer surface (mostly the posterior portion) of the arm to the head.

The three yang channels of the foot (Stomach, Gallbladder, and Bladder) begin on the face, the eye region and down the body and along the outer surface (mostly the anterior and lateral portion) of the leg to the foot.

The three yin channels of the foot (spleen, liver and kidneys) begin on the foot and travel along the inner surface (mostly posterior and medial portion) of the leg to the chest or flank.

The flow of qi through each of the twelve channels comprises an internal and an external pathway. The external pathway is what is normally shown on an acupuncture chart and is relatively superficial. All the acupuncture points of a channel lie on its external pathway. The internal pathways are the deep course of the channel where it enters the body cavities and related Zang-Fu organs. The superficial pathways of the twelve channels describe three complete circuits of the body.

The flow of energy through the meridians is the following: from the channel "lung" of the hand (taiyin), to channel "large intestine" of the hand (yangming), to the "stomach channel" of the foot (yangming), the "spleen" channel foot (taiyin), the "heart" of the channel by hand (shaoyin), the "small intestine" hand channel (taiyang), the "bladder" channel of the foot (taiyang), the "kidney" channel of the foot (shaoyin), to channel "pericardium" of the hand (jueyin), the San Jiao hand channel (shaoyang), to channel "gallbladder" of the foot (shaoyang), the "liver channel" of the foot (jueyin), and then again to the channel "lung" of the hand (taiyin).

The acupuncture originated in China are uncertain. The first bibliographic references to this practice are present in the ancient Chinese text Huangdi Neijing, the legendary Fundamentals of internal medicine (acupuncture Story) which was compiled from 305 to 204 BC. Before that, it is conceivable that they were used stone tools, or bone, and therefore absolutely far from the vision that we have today of the practice. The practice spread centuries ago in many parts of Asia; currently is a component of traditional Chinese medicine and some forms are also described in the literature of traditional Korean medicine, which is yakchim call, as well as in India.

In a very rich cultural area, which was developed in the Zhou era, it is easy to imagine that medical science had an important role. In the book Tian Guan Zhou or Rites of Zhou, compiled in the second century BC, it was already specified the hierarchy of the various categories of doctors divided into:

- Yi shi doctors or teachers;

- Yi yi or medical disease (internal medicine);
- Yi yang, or doctors of the wounds (surgery and traumatology);

- Yi shi medical or food (dietetics distinct from that of veterinary).

In this same period will begin to take shape in an embryonic state the theory of breath or energy (qi), which, supported by the logic of yin and yang and the Taoist concept of "dao", conceived as the determining law of the entire universe since creation, will come to expand and take shape, according to the law of the five movements, which will be applied to medical knowledge only after several centuries (407-310 BC).

Probably was Bian Que (VI century. BC), the first Chinese doctor to be entitled to full this title, which operated a systematization of all medical knowledge antecedents. His clinical experience in acupuncture, diagnostics, pulse diagnosis and knowledge about the poultices, decoctions and "puncture with stone", have come down to us through a rather large number of writings, including the two most famous works are:

- Bian Que Nei Jing or Classic of Internal Medicine Bian Que;

- Bian Que Wai Jing or Classic of Medicine Bian Que External.

From these texts and several episodes of the life of Bian Que, of which we have knowledge through the work of a historian who lived during the Western Han Dynasty (206 BC - AD 26): Sima Qian, we realize that, even in the field diagnostic, they began to have more detailed knowledge and systematic. In the area of therapeutic various techniques they made their way to their diversification, to differentiate themselves from each other completely. It will begin so to speak more specifically of pharmacotherapy, exercise and massage. Already in Shi Jing or Classic of Odes, the sixth century BC, a veritable anthology of poems, there appear citations to pharmacotherapy and are appointed 50 drugs derived from plants such as Pueraria lobata or Rubia cordifolia. Even in the Wu Shi Er Bing Fang or Recipes for Fifty Diseases describes the symptoms and the medication methods of 52 obstetric diseases, pediatric and internal medicine. They are cited 252 medicinal substances, many of which are still in use and over a hundred of these will be taken in the Shen Nong Ben Cao Jing or Classic of Materia Medica Emperor Shen Nong, a work compiled in the Han era.

As for medical gymnastics, there is excellent documentation dating back to the tomb of Ma Wang Dui, ie to 168 BC, which describes 44 different postures, spread over four levels. The images are often accompanied by headlines that refer to the movements of some animal species, as well as mentions the conditions for which are to be used: eye diseases, orchitis, rheumatism, gonalgie and intestinal disorders.

Practice of gymnastics has its origin in the ritual dances of shamans who, emulating the movements of certain animals, were intended to ward off evil influences. Gradually, however, these movements began to take on an autonomous character and a therapeutic purpose dictated by the insights of shamans that they connected movements to the various pathologies.

These movements became so real gymnastics and were joined also to respiratory techniques and to dietary rules, especially for the prevention of numerous diseases.

As for the massage, it seems to have existed a text entitled Huang Di An Mo Jing or Classic of the Yellow Emperor's massage, compiled in the third century BC and then he went lost. In this text we were collected all the previous knowledge about this therapeutic technique used in many diseases, especially in those painful. The period of the "Warring States" (475-221 BC) also sees the completion of one of the most famous texts of Chinese Medicine: the Huang Di Nei Jing, or the Yellow Emperor's Classic of Internal Medicine. It is without doubt, the most significant and most complete ancient work to the study and understanding of acupuncture and Chinese medicine. The text is compiled in the form of dialogue between the Yellow Emperor Huang Di and his physician Qi Bo and comes to anatomy,
physiology, etiology and prevention of diseases through acupuncture and moxibustion, with some hints of dietetics and pharmacology.

The work, consisting of 18 books, is divided into two parts of nine chapters each: Su Wen and Ling Shu or Simple Questions or Axis Spirit. The first part is interested above the theoretical aspects, while the second examines the practical applications and therapy. The science of Chinese medicine spread throughout the Eastern world.

In fact, acupuncture was introduced to Europe in the seventeenth century by Willem Ten Rhyne, MD Dutch doctor, who worked for the East India Company that would find in 1679 in Nagasaki in Japan, where he remained for two years. A century later, and Dujardin Vicq Azyr analyzed the process in their respective works. However, it seems that Louis Berlioz, the father of the composer who was the first to groped in France in 1810, later imitated by many doctors. Since 1853, the console Dabry involved in its distribution to Europe, but in reality is that since 1927 it became popular through the work of sinologist George Soulie de Morant.

While in China, acupuncture was banned in 1822 by the Chinese emperor and abolished the Imperial Collegio medical program, but it continued to survive in hiding.

Even Mao Zedong tried to eliminate this practice - because of its foundations Taoist incompatibilili with the Marxist ideology, but then acupuncture was rehabilitated.

Acupuncture has gained the attention of stationmedicine, when President Richard Nixon visited China in 1972. In a part of the visit to the US delegation was shown a patient undergoing major surgery while fully awake, as anesthesia he had received acupuncture, rather than the traditional anesthesia. Later it was found that patients selected for the demonstrations of the surgery had both a high pain tolerance and received heavy indoctrination before the operation; and in some of these cases they were often sedated with morphine administered through an IV that had to contain only fluids and nutrients.

In Italy only recently it has been recognized acupuncture as a medical act and therefore can only be carried out by Doctors and Veterinai.

**Conclusions**

The modern pain and rehabilitation therapy owes a lot to the experience China through acupuncture has shown an alternative method to faraamcologica therapy.
Iconography essential

Map Acupuncture dates back to the Ming Dynasty.

Another map Acupuncture dates back to the Ming Dynasty.
Another map Acupuncture dates back to the Ming Dynasty.

Acupuncture needles.

Average size of a needle.
Model Modern Acupuncture

Affixing of needles for treatment of carpal tunnel syndrome.

**Essential References**

- Giorgio Dobrilla, Acupuncture, in Alternatives. critical guide to unconventional treatments, adverbs, 2008
- Simon Singh and Edzard Ernst, Needles, potions and massages. The truth about alternative medicine, Rizzoli, 2008

• Ronald Guilloux, De l'exotique au politique: la réception de l'acupuncture extrême-oriental dans le système de santé français (XVIe XXe siècles), Université de Lyon 2, 2006 (thèse de Science Politique)
