History and Development of Zhuang Medicine
Shallow Needling from Bone Needle, Pottery Needle, and Bronze Needle to Electroacupuncture

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Abstract: Zhuang medicine shallow needling has a long history and plays a significant role in Chinese medicine. With the development of medical treatment in China, there is a constant improvement in the use of needles. Bone needles have been modified to pottery needles, bronze needles, and electroacupuncture. From this long development history, there are some improvements in terms of material and technology. By analyzing and comparing the primitive and current acupuncture instruments used in China and their therapeutic effects, it can be seen that China’s medical treatment is constantly improving and will continue to improve with technology.

Keywords: Shallow needling of Zhuang medicine; Bone needle; Bronze needle

Online publication: March 30, 2023

1. Introduction

In China, the shallow needling method of Zhuang medicine plays a significant role in the medical industry. The earliest acupuncture performed was with bone needles, which have been improved in terms of material in the later period. Bone needles were the earliest needles manufactured and used in China, dating back to 50,000 years ago. Bone was the main material, and they were the main acupuncture tool in primitive medical treatment. Following bone needles, bronze needles were manufactured, in which the main material is bronze. Pottery needles, on the other hand, with a long history in Zhuang medicine have shown significant clinical effects. The shallow needling method of Zhuang medicine, originating in the Guangxi region of China, has a significant role in Chinese medicine. With the continuous development of medical treatment in China, bone needles, bronze needles, pottery needles, and electric needles have been used successively. In this article, we mainly analyze the medical instruments used for shallow needling in Zhuang medicine and expound the evolvement of these instruments.

2. Origin and development of the shallow needling method of Zhuang medicine

2.1. Origin of the shallow needling method of Zhuang medicine

The shallow needling method of Zhuang medicine originated from the Guangxi Zhuang Autonomous Region during the primitive period thousands of years ago in the era of old utensils. With the continuous development of human wisdom, the shallow needling method of Zhuang medicine continuously improved. However, the role of the acupuncture method of Zhuang medicine could not be fully utilized in treatment due to the lack of materials for acupuncture instruments.
In shallow needling, needles are used to stimulate relevant acupoints to achieve the purpose of treatment. Since Zhuang doctors themselves have mastered various curing methods and considering the feedback of patients who received shallow acupuncture, it has certain significance in medicine \cite{2}. It can be divided into the skin theory and the medical theory. The skin theory is mainly based on skin reactions. Since the body’s outer barrier is, in fact, the outer layer of the human body, it can reflect the manifestations of internal organ lesions, and since the outer barrier of the body is closely related to the human body, it is possible to determine if there is any disease based on the color and changes to the skin. The medical theory, on the other hand, is mainly based on relevant medical books and subcutaneous nerve tissue to understand diseases and prescribe relative treatments. Since there are many nerves around the spine, limbs, and bladder of the human body, the presence of nerve sensation is based on the gasification of certain tissue fluids and the movement of defensive Qi and a disease is judged based on nerve sensation. The main theory of Zhuang medicine is the synchronization of the three Qis: heaven, earth, and human. The shallow needling method of Zhuang medicine stimulates the skin of the human body. The needles are shallow, corresponding to the heaven part of the human body (the skin), and play an important role in the recovery and adjustment of Qi and blood.

2.2. Development of the shallow needling method of Zhuang medicine

The shallow needling method of Zhuang medicine has improved owing to the improvement in instruments. In the primitive society, the instruments used were mainly bone needles, and they were mainly used for treating mild conditions. In the later period, with the continuous improvement in instruments, the needles were used to effectively assist shallow needling, and the scope of treatment expanded from mild conditions to serious diseases. Patients became more appreciative of the shallow needling method of Zhuang medicine. There were many loopholes in the shallow needling method during the Paleolithic Age and other ancient times, and the materials used for the needles were limited, which led to its dependence on medical-related pathologies. The needling instrument has continuously improved, changing from an auxiliary function to an indispensable step in the shallow needling method. In modern-day medicine, the shallow needling method is widely recognized by patients as it has shown to be effective \cite{3}. However, due to the particularity of the Guangxi region, its speed of development has been hindered to some extent, thus having a certain influence on the shallow needling method of Zhuang medicine. In order to prevent this influence, Zhuang medicine has made corresponding remedial plans. There has not been any incidence of disease misdiagnosis through the shallow needling method due to its crudeness, and the method has improved in the later stage and gradually become an important part of treatment.

3. Origin and development of Zhuang medicine acupuncture instruments

3.1. Origin of acupuncture instruments

Shallow acupuncture, which originated in Guangxi region, is an important part of Zhuang medicine and is relatively common among Zhuang people. The shallow needling method of Zhuang medicine is mainly based on medical theories and requires the use of needles. Therefore, the shallow needling method is closely related to new and old stone tools. The earliest place where primitive needles were discovered was Guangxi Zhuang Autonomous Region. However, due to limited medical equipment and local policies in the primitive society, the medical needles were crude. Although diagnoses were not affected, the treatment effect was significantly affected. During the New Paleolithic Age, needles were used instead of manual acupoint pressure therapy, and its curative effect was remarkable compared to manual acupoint pressure therapy. The rate at which it was used was also rising, thus creating certain research value for the development of related medical instruments.
3.2. Development of acupuncture instruments

3.2.1. Bone needles
From the Paleolithic Age to the Qin and Han Dynasties, bone needles were common tools. In daily life, bone needles were used not only to sew clothes, but also in medicine. The main materials are animal and fish bones, which were mainly polished according to their shapes and then shaped into needles. It was difficult to make them due to the shape of the bones. Since the needles were relatively simple, they were unable to play an auxiliary role but owing to the conditions during the Paleolithic Age, bone needles were still used as the main needles in shallow needling.

3.2.2. Pottery needles
Before the Warring States Period, pottery needles were widely used. Pottery needles refer to the treatment of patients using pottery and porcelain pieces instead of needles. Before the Warring States Period, the materials for needles were relatively scarce; hence, medical skills were unutilized. Most patients were not cured, and serious adverse outcomes occurred. As the pottery needles cannot be polished due to their material, the feedback from patients is extremely poor; thus, they were not used as the treatment of choice. When necessary, bone needles were still used for shallow needling.

3.2.3. Bronze needles
During the Xia, Shang, and Zhou Dynasties, bronze was widely used. Hence, the medical use of bronze needles improved. These needles were mainly used as medical instruments for treating patients. The main material is bronze. Bronze was not only the main material in needles, but also one of the main materials in daily utensils. Therefore, the craftsmanship of bronze needles was more refined. There were further improvements to bronze needles, making it easier to grasp the patient’s acupoints during treatment and further contributing to medicine. Before using any bronze needle for acupuncture, the bronze needle would be sterilized. Due to the superiority of bronze material and manufacturing methods as well as certain improvements in the treatment of Chinese medicine, more attention was paid to medical hygiene. Hence, the feedback of patients on bronze needles was better. In July 1976, Guangxi archaeologists found three silver needles in the funerary objects of No. 1 Han Tomb in Luobowan, Guigang City, with similar external shapes, noose-shaped needle handles, and sharp, conical needle bodies of 0.2-cm diameter. The lengths of the three needles were measured to be 9.3 cm, 9.0 cm, and 8.6 cm, respectively. From their appearance, there is a circular hole at the top of the handle of all three needles. The shape of the silver needle is similar to modern acupuncture needles, but it is relatively thick, thus confirming that it is a medical needle. This is the earliest metal needle with a rope-shaped needle handle discovered in China thus far. This kind of needle handle has had a profound influence on the shape of needle handles in later generations, and it is used to this day. It is of great significance to the history of needling instruments in China [4].

3.2.4. Electroacupuncture
Electroacupuncture is highly sought after by patients in this age. Since it is a relatively new technology, electroacupuncture is in the stage of perfection in terms of its medical theory and technology. With electroacupuncture, the acupoints can be controlled precisely, and the pain caused by shallow needling can be reduced. Different treatment options are offered for different conditions. Shallow needling has a millennial history in medicine, and its theoretical basis is centered on natural therapy. Based on the patient’s disease, relevant acupoints are stimulated to achieve a healing effect. According to relevant data, shallow needling has certain significance in clinical satisfaction and curative effect and is well received by patients [5].
4. Discussion
With the continuous development of medical technology, Zhuang medicine has improved its instruments for acupuncture from the most primitive bone needles to electroacupuncture. From the Paleolithic Age to Qin and Han Dynasties, bone needles were made from animal bones. Bone needles were relatively crude, and the curative effect was only average. Before the Warring States Period, pottery needles drew more interest as their curative effect was better than bone needles in acupuncture treatment. From the Western Zhou Dynasty to the Spring and Autumn Period, bronze needles were introduced. Since the Western Zhou Dynasty was the heyday of bronze, bronze needles were the most popular needles. The curative effect also improved with the use of bronze needles. Compared with the aforementioned acupuncture instruments, electroacupuncture is an improvement in the appliance itself. It can effectively reduce pain during treatment and improve patient satisfaction. In this article, we mainly expound the origin and development of the shallow needling method of Zhuang medicine and describe the evolvement of medical needles from bone needles, pottery needles, and bronze needles to electroacupuncture. Through the different eras of acupuncture from using crude to fine needles, the curative rate has improved. The shallow needling method of Zhuang medicine is mainly based on the relevant medical theory of shallow needling of Zhuang medicine since its needles are yet to be perfected and the needling effect only accounts for a part of the healing process. However, with the continuous improvement of medical technology, shallow needling will be more accurate. Its role in medical treatment is constantly changing, and it will eventually become an irreplaceable part of acupuncture.

The shallow needling method of Zhuang medicine originated in Guangxi and developed on the basis of accumulated acupuncture experience from Xiou, Luoyue, and other ethnic groups in Guangxi in ancient times. Exquisitely, the ground stone needles and bone needles that existed in the Neolithic Age in Guangxi are the best explanation for the origin of acupuncture in the Zhuang area of Guangxi. Ground stone and bone needles were developed from the accumulation of acupuncture experience. Without the practice of acupuncture in the Paleolithic Age, there would be no ground stone and bone needles in the Neolithic Age. The law of development from ground stone, bone, pottery, and bronze to silver needles is consistent with the development of human civilization. The historical process of the development of acupuncture in Zhuang medicine is similar to that of acupuncture and moxibustion in Chinese medicine. However, in the process of development, due to differences in humanity, geographical, and social development, they developed in different directions.

The most important connotation of the acupuncture theory in Zhuang medicine is the theory of synchronization of the three Qis: heaven, earth, and human. In Zhuang medicine, the whole human body can be divided into upper, middle, and lower parts: the upper part represents heaven, the lower part represents earth, and the middle part represents human. Physiologically, the Qi produced by heaven is at the top, and it descends; the Qi produced by earth is at the bottom, and it ascends; the Qi produced by human is at the middle, and it dominates harmony, taking the Qis from both heaven and earth and harmonizing them. The heaven, earth, and human parts of the body operate synchronously with the natural world (heaven and earth), restricting the growth of metaplasia and sustaining life. If the descend and ascend of Qi are congruous, and they meet in the middle, Qi and blood will be harmonious, yin and yang will be balanced, and the viscera will be at ease, adapting to the changes in nature; this is the normal state of human health. On the contrary, if the Qi from heaven does not descend, and the Qi from earth does not ascend, the Qi that meets in the human part is not harmonious, and the three Qis cannot run synchronously; this is a pathological state, which can cause various diseases. Man must be consistent with the law of change of heaven, earth, and nature, which is emphasized by the synchronization of the three Qis. In Zhuang medicine, the ring acupoints and other acupoints for acupuncture as well as the techniques of acupuncture are inseparable from the theoretical guidance of the synchronization of heaven, earth, and human Qi.
In conclusion, the long history of medical treatment in China has brought about certain research value and reference significance to China’s medical undertakings. With the continuous advancement of science and technology, acupuncture in Zhuang medicine will also continue to develop, along with the theoretical aspect, methods, and instruments used in acupuncture, thus enriching the acupuncture and moxibustion treatments used in Zhuang medicine and promoting the development of Zhuang medicine itself.

**Funding**

(1) The National Ministry of Science and Technology Key Research and Development Program Funding Project (No. 2017YFC1703903).

(2) Self-funded scientific research project of Guangxi Zhuang Autonomous Region Administration of Traditional Chinese Medicine (No. GZZC2020076).

(3) Key Laboratory of Guangxi Zhuang Autonomous Region, DNA Barcode Identification of Zhuang Medicine Dripping Avalokitesvara (No. GXZYKF2020-10).

(4) Guangxi Education Department Guangxi College Young and Middle-Aged Teachers Basic Ability Improvement Project (No. 2023KY0301).

(5) General Project of First-Class Discipline Construction Project of Guangxi University of Traditional Chinese Medicine (No. GJKY2019 XK043).

(6) Guangxi University of Traditional Chinese Medicine, Guangxi School of Traditional Chinese Medicine Inheritance and Innovation Team funded project – Traditional Chinese Medicine Master Huang Jinming Academic Thought and Clinical Treatment Inheritance and Development Research Center (No. 04B22058V2).

**Disclosure statement**

The authors declare no conflict of interest.

**References**


