

# Brief Introduction to the Contribution of "Zhouhou Beijifang" to the Emergency Treatment in Traditional Chinese Medicine

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**Abstract:** As the first emergency treatment handbook in China, "Zhouhou Beijifang" recorded a large number of treatment methods used in attending to emergencies, and is known for its simplicity, convenience, low-cost and experience. This paper discusses the important value of moxibustion, nasal drug therapy, sublingual administration, emergency surgery and excretion-based drugs in the treatment of emergencies in the book, and discusses its significance and contribution to modern medicine in the history of emergency treatment.

**Keywords:** Zhouhou Beijifang; Traditional Chinese Medicine; Emergency; Contribution

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## 1 Introduction

The "Zhouhou Beijifang" (hereinafter referred to as "Zhouhou") by Ge Hong of the Eastern Jin Dynasty is the earliest existing traditional Chinese medicine (TCM) clinical emergency handbook. The title of the book means an emergency handbook that can be always kept behind the elbow (i.e. to carry along). It is a practical first-aid handbook that one can keep at hand. The book has a total of 2635 prescriptions, including 123 on apparatuses and techniques, 99 acupuncture prescriptions, 21 comprehensive prescriptions, and 2392 medical prescriptions<sup>[1]</sup>. They are all designed for emergencies, and the apparatuses and medicinal materials used in the book

are all readily available. First-aid methods are also simple and easy to learn, and can be carried out by non-medical personnel, so the book is known for its simplicity, convenience, low-cost, and experience.

## 2 Moxibustion

"Zhouhou Beijifang" comprises of eight volumes and 73 articles, where only 69 articles have content in them (article 37 has a title but no text, and the 44th, 45th, and 46th articles have no title and no text)<sup>[2]</sup>. Among them, 70 articles recorded 101 entries regarding acupuncture and moxibustion, including 6 entries on needle techniques, 1 entry on combined use of acupuncture and moxibustion, 2 entries on acupoint massage, and the rest are moxibustion prescriptions<sup>[3]</sup>. Compared to acupuncture, moxibustion is easier for non-doctors to operate, simple and easy to access, suitable for ordinary people to perform first-aid with it, so the first-aid methods in this book is mostly moxibustion treatment. Ge Hong advocated that "for moxibustion the sites of administration are only given in units of inches without naming any acupoints, so that ordinary people can use the instructions upon reading, and one need not go beyond the fence to get equipped, that those who believe in it may be free from disasters!". "Without naming any acupoints" makes it easy for ordinary people to locate and select acupoints. Coupled with simple and easy-to-operate moxibustion, it is more convenient for timely treatment of emergencies. The moxibustion methods in the book can be applied to many emergencies, including more than 20 kinds of situations such as sudden cardiac arrest, coma, sudden

heart and abdominal pain, apoplexy, and stroke, etc., involving many diseases such as those of the internal, external, and andrology, etc.<sup>[4]</sup> Nine articles listed moxibustion as the first choice for treating emergencies due to its simplicity and effectiveness. Zhou Jianwei<sup>[5]</sup> concluded that the reason behind the remarkable curative effects of moxibustion in treating emergencies is that it can "invigorate qi for relieving desertion, reviving yang for resuscitation", "regulate qi and activate blood, eliminate blood stasis", "dispel wind and remove toxins, lead evils out of the body" and "outthrust and eliminate evils, dissipate heat and open up blockages". The moxibustion prescriptions recorded in "Zhouhou" have great guiding significance and reference value for our current research on moxibustion treatment of emergencies.

### 3 Nasal Drug Therapy

Nasal medication mainly refers to the way of administering Chinese herbal medicine through the nasal cavity to stimulate the nasal mucosa to absorb the medicine, thereby transporting the qi in the body, dredging the viscera and meridians, and promoting the circulation of qi and blood, which is a simple and quick way to prevent and treat diseases with remarkably rapid efficacy<sup>[6]</sup>. There are few discourses on nasal medication in "Zhouhou". Mei Quanxi<sup>[7]</sup> et al. found only 27 medical prescriptions on nasal medication after sorting out "Zhouhou", but it can also be seen that this method has significant effects on the emergency treatment in TCM. "Zhouhou" Volume 1, Article 5, Prescriptions for Treating Nightmares and Insomnia: Take the yellow soil at the end of the stove and blow it into the nose through tube. Take realgar and osmanthus, and blow them into the nose, they work well in combination." The materials used in this article are easy to obtain, convenient to operate, and effective. The principle of Ge Hong's treatment is similar to the atomization inhalation method in modern medicine. Some scholars have found that<sup>[7]</sup> the medicines used by Ge Hong for treating emergencies are mostly pungent and warming, and are generally rich in volatile oils, so that these medicines can reach the site of disease quickly and serve the purpose of treating emergencies, so they have good effects on strokes and comas.

### 4 Sublingual Administration

In this book, Ge Hong also made another great pioneering work, that is, he proposed sublingual administration to treat heart diseases for the first time. Hu Ying<sup>[8]</sup> sorted out "Zhouhou" and found that Ge Hong specialized in using pungent and warming medicines, with cinnamon twig and calamus being the most representative. These medicines are rich in volatile oils, which are quickly absorbed through sublingual administration, have high bioavailability, and can exert rapid effects in treating emergencies. Therefore, they have significant effects in treating emergencies such as comas and paralysis, and can fully bring out the unique effects of sublingual medicine. The first volume of the book recorded "Article 2, Prescriptions for Treating Sudden Cardiac Arrest and Coma: smash the calamus, and put under the tongue together with a large jujube seed. Modern studies have proved<sup>[9]</sup> that the absorption time of sublingual drugs is only 30 seconds to 1 minute, which is nearly 20 times faster than oral drugs. Therefore, this method has its own unique advantages for first-aid. Only in modern times did the Western world discover that sublingual nitroglycerin can effectively relieve angina pectoris, whereas Ge Hong had discovered this method more than 1600 years ago in China. This method has extraordinary instructional significance and clinical value for TCM emergency treatment, which is the cornerstone of current TCM clinical experiment and practice.

### 5 Emergency Operations

In this emergency treatment prescription handbook, in addition to the use of traditional medicine and acupuncture, Ge Hong also creatively invented many first-aid methods such as the earliest mouth-to-mouth resuscitation, simple orthopedic fixation, catheterization, enema, surgical hemostasis and disinfection, abdominal puncture and gastric lavage etc. The book recorded that "...if one's body is already stiff, gradually massage to soften the body, and keep pressing on the abdomen. In a short time, breath will come out from the mouth, and breathing will resume and the eyes will open, keep carrying out the procedure and do not stop." According to this record of resuscitation, it is found that this

method is consistent with the principle of current cardiopulmonary resuscitation (CPR). It is also recorded that when someone accidentally ate wild kudzu, "(the rescuer should) open the victim's mouth with objects, take three chicken eggs and stir to mix evenly, then shove it down the victim's throat, and the victim will spit out the wild kudzu in a short time", through the use of the vomiting method to empty the poison from the victim's stomach and reduce the toxins in the body. It was also written that "for difficulty urinating, smash the squash root, and hydrolyze with a bit of water, then blow into the lower part through tube", "for constipation, blow into the anus from the upper end, for difficulty urinating and excreting, blow it in front and behind to unclog". Although performing catheterization with bamboo stick is crude and involves the risk of infection, it was already a relatively good TCM surgical emergency treatment given the medical level and conditions at that time. Putting aside its shortcomings in terms of the lack of sterility and strict disinfection, it has played a vital role in the emergency treatment at that time.

## 6 Other Treatment Methods

Ge Hong had also used fecal drugs to treat emergencies. The book recorded a large number of human and animal excrements used as medicine to treat diseases<sup>[10]</sup>, such as human urine, male rat feces, chicken feces, horse feces, dog feces, Niudong (thin cow dung) and other animal feces were used to treat diseases. Through sorting out the book<sup>[11]</sup>, it was found that fecal drugs have the effects of clearing heat, relieving pain, detoxification, and eliminating filth. As Ge Hong wrote in "Zhouhou • Article 61: Prescription for Treating Bee Sting": "If bee stings people, wash the wounds with human urine ". Human urine is more convenient and easy to obtain for medical treatment. It is available everywhere and it can take effect quickly for emergency treatment. In modern medicine, these drugs have rarely been used for the treatment of diseases, but there are a small number of them still in use. For example, in modern research, it is said that adding urine of children to hemostatic drugs has a significant effect on the treatment of epistaxis and acute bleeding<sup>[12]</sup>. With the development of the times and progress in the medical standards, fecal medicines have been gradually

phased out, but it has a special contribution to TCM for having promoted the development of TCM at that time. Although it is less useful now, its therapeutic mechanisms should still be discussed to further promote the development of TCM.

## 7 Conclusion

As the first treatise on TCM emergency treatment in China, "Zhouhou" recorded a large number of inspiring and instructional treatment methods for later generations. At the time when oral Chinese medicine was still the main treatment method, boiled decoctions were very unsuitable for treating emergencies due to their slow effects. Combined with the living conditions of the common people at that time, it was difficult to afford the expenses of visiting a regular medical clinic, hence the publication of Ge Hong's "Zhouhou" was a life-saving book for the ordinary people. It is portable and easy to understand, most of the apparatuses and medicinal materials needed in the book are easy to obtain, and the operation procedures are simple, and the effects are rapid, creating a precedent for the systematic treatment of emergencies. We should study the treatment methods in the book comprehensively and systematically, extract the contents that can still be used for reference or inspire ideas for modern emergency treatment, and further enhance the status and importance of TCM emergency treatment in modern medicine.

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