

Analysis of External Treatment Methods and Technical Characteristics of External Treatment

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Abstract. Chinese medicine external therapy is a treatment method of Chinese medicine with Chinese characteristics. The effect of traditional Chinese medicine external treatment, convenient operation, external treatment and technology has great prospects for development. The traditional Chinese medicine external treatment method and technical characteristics were analyzed.

1. Introduction

External treatment of Chinese medicine is one of the earliest methods used to treat diseases in China. With the continuous progress of society, the continuous innovation of science and technology, the external treatment is also advancing with the times. Nowadays, the external treatment of Chinese herbal medicine has been improved constantly in terms of techniques and methods. External treatment for disease treatment and health care of people have played a positive role. External treatment has great advantages, in the future, with the development of transdermal drug and reinforcement of nano technology and other new technologies and the emergence, external treatment administration has brought a great impact, to further promote Chinese medicine development cure.

2. Development of External Therapies

External medicine is known for disease treatment with the earliest origin, according to historical records, as early as in the primitive society, our ancestors with mud, grass stem sap to coated wound. With the progress of society, the development of medical technology, gradually formed the external treatment system. Chinese medicine external treatment of origin in the pre Qin period, the growth of Hantang, innovation in the song and Yuan Dynasties, matured in the Ming and Qing Dynasties. *Shan Hai Jing* is the earliest records of traditional Chinese medicine external treatment effect has a lot of external therapy. *Fifty-two Disease* record the applicator, dipping, ironing, smoked, acupuncture, cut sores, knife kyu, washing Fengta, treatment methods and other large angle method, open the external medicine precedent [1].

Huang Di Nei Jing records a large number of external use Chinese herbs and external treatment methods. *Nei Jing* is the beginning of external plaster therapy. *Ling Shu* is the earliest monograph of acupuncture. *Shang Han Za Bing Lun*, the Eastern Han Dynasty written by Zhongjing Zhang established the syndrome differentiation system, also introduced a number of external treatment of traditional Chinese medicine and its treatment method, including cauterization, medicated sublingual method, blow throat, ear, inspersion, medicine massage, moxibustion, suppository method (vaginal medication method), conductance method (honey enema), toe amputation. Later, with water treatment with bile indigo hair spot to Tangmofa febrile disease, sage, Xijiaodihuang boil mounting method in treating the syndrome of blood stasis. More Coptis powder for the treatment of acute eczema; with pig bile, honey enema in the treatment of constipation and other treatment methods, is still used today.



In the Tang Dynasty, a large number of external therapies were included in the book *Qian Jin Yao Fang* and *Qian Jin Yi Fang*. For the first time, the method of using magnet to treat deafness is more than 1200 years earlier than that of rubber tube catheterization.

The Song Dynasty, with the development of industry and commerce, external application gradually expanded to outside, other subjects. External *dosage* form and the transdermal delivery technique has also been developed to a great extent.

In the Ming Dynasty, acupuncture technique was adopted more widely, There is many use moxibustion for the treatment of various diseases. *Surgical Authentic*, summarizes the treatment methods of ulcer. Doctor Shanxian Wu thinks "Diseases begin with fur, the medicine may then enter". In his book *Li Yue Pian Wen* introduces the treatment methods of two kinds of external. One is the treatment method to the plaster, It took many oral decoction, pill into a plaster paste. The range of treatment involved internal medicine, surgery, gynaecology, paediatrics and five Sense Organs. The other is the drug powder myrrh. It is directly topical. Avoid unwilling medication, not taking medication and the difficulty of taking medicine unfit [2].

Since modern times, with the development of science and technology, the medical field in our country has been greatly developed, unprecedented progress has also been made in external therapies and techniques. Point application and acupoint *treatment* also play an important role in respiratory diseases and cardiovascular and cerebrovascular diseases.

Today, the external medicine is from single medicine to compound medicine, and the external treatment method is applied from simple *external* application to various dosage forms. External treatment of Chinese herbal medicine is used more and more widely, and its techniques and methods also need constant innovation and improvement, and innovation in succession.

3.Application of external therapies

Chinese medicine external treatment has the advantages of quick action, simple and convenient, easy to learn, easy to use, easy to spread, safe to use and less side effect. Some diseases, such as modern medical treatment, are not effective, but the external treatment of Chinese medicine has a very good effect on its treatment.

Traditional Chinese medicine can not only can promote patients recover faster and various functions, compared to the western *medicine* can reduce the adverse reactions and side effects of Western medicines. At present, the external treatment of Chinese medicine has become one of the characteristics of academic research in Chinese Medicine.

3.1.Acupoint Application

Point application therapy is a kind of compound therapy which combines meridian and acupoint medicine. It is to grind the medicine into fine powder, mix it into a paste with a certain solvent, or make a ointment, a pill, and other forms, or make a paste, or spread the powder on the plaster, And then apply the acupoint directly, the affected area is a kind of non-invasive pain acupoint therapy using the stimulation of Chinese medicine to the acupoints.

The mechanism of Acupoint Application in modern Chinese medicine is that the main barrier of transdermal absorption of drugs is the stratum corneum of skin, After the drug is applied, it can promote the expansion of local blood vessels. Causes the blood circulation to speed up, the skin surface medicine concentration and the skin deep level medicine concentration has formed the concentration difference. Then through passive diffusion, through the stratum corneum, into the dermis of capillaries, through the body circulation to target, and play an obvious pharmacological effect [3].

Acupoint application therapy is suitable for cervical spondylosis, scapulohumeral peri-arthritis, hyperosteo-geny, lumbar disc herniation, rheumatoid arthritis, lumbago, pain caused by traumatic injury, and can play a refreshing, relieve fatigue. *The* main respiratory system diseases used in clinic, digestive system diseases, gynecological diseases. Pediatric disease, circulatory system disease, connective tissue disease, rheumatism and other pain syndrome.

3.2. Bath Method

Medicated bath therapy, also known as hydrotherapy, with Chinese herbal medicine decoction bathing local or systemic, medicine juice can also be added to fresh herbs bath, body through soaking, bathing, liquid through pores into effect on muscular striae lesion, penetrating meridians, to internal organs, produce the effect from the outside inside, to prevent diseases and health care. According to different diseases, different choice of traditional Chinese medicine, efficacy through soaking, fumigation, wash bath, play the skin moist, cooling blood, detoxification, declared open cou and increase the effect, the effect of drug treatment [4].

Bath method is easy to use, does not require special facilities, can be carried out at home, convenient and good curative effect, little side effect.

3.3. Fumigation

Fumigation pass through Chinese medicinal herb which is made of decoction. It use boiling liquid, While hot fumigation, bathing the body parts of the lesion. With the help of the drug herbal fumigation and steaming. Promote the circulation of Qi and blood and Tongli joints, and by the micro sweat of expelling wind and cold dampness. It can play the role of warming the meridians and collaterals, promoting blood circulation to dissipate blood stasis, dispelling wind and dampness, killing insects and relieving itching.

Herbal fumigation combined with fumigation and immersion in two ways. Give full play to the permeability of steam and hot water, and prolong the time of drug action. Most of the doctors think that the main mechanism of fumigation is drug fumigation, The viscera and body skin is the whole connected by meridians, Fumigation therapy uses steam fumigation, Then bathe the whole body or part of the body with liquid medicine. Through the meridians deeply cou, each part of the viscera, to the whole body. And through dredging channels and collaterals, harmonizing Qi and blood, to exert its pharmacological function. The mechanism of modern fumigation method includes four aspects: the penetration of drugs, skin absorption effect, improve local microcirculation and warm steam stimulation [5].

Fumigation of Chinese medicine for cold, cold, stroke, traumatic injury, and the curative effect by various skin diseases are very good. It is often used in the treatment of anorectal diseases, peripheral blood circulation disorders, motor *system* diseases, chronic rheumatism, skin diseases, andrology diseases, and other surgical diseases.

3.4. Hot Pressing

Hot pressing or ironing is our traditional medical therapy. The principle is to use something that can absorb heat or to mix certain drugs. Heating, ironing on the affected part of the body or special points to massage, to play an external treatment of the effect of treatment. Hot pressing is widely used in internal, external, gynecological, pediatric, neurological and other diseases treatment. It is especially suitable for diseases caused by Yang deficiency and bone and joint diseases. Drugs with the power of warm, from the table into the inside, through the meridians and organs, and then through the blood circulation, tonifying qi, invigorate the blood, warm yang scattered cold, sparse meridians, so as to promote the restoration of body function, to achieve the purpose of curing the disease [6]. With the development and innovation of science and technology. The method of hot pressing has been improved, more reasonable, and a new type of hot pressing has been developed, such as infrared hot press bag, Japanese shaped porcelain pot, etc. Make up the traditional hot ironing uneven temperature, not continuous shortcomings. At present, the new far infrared hot press bag or shaped container can work by infrared ray [7]. Infrared is a harmless electromagnetic wave, which is closely related to biological growth, and can reduce the molecular mass of water and make it active. At the same time, it can cause the resonance between molecules, activate tissue cells, promote blood circulation, promote metabolism, improve immunity, and also have dehumidification effect.

3.5. Point Injection Method

Point injection therapy, also called “water needle” therapy. It is to inject the right amount of medicine into the meridian, the acupoints or the tenderness points. Acupuncture point injection therapy, through

acupuncture, acupuncture points, drugs, acting on the human body. Contact with each other to prevent all kinds of diseases.

Acupoint injection has drug specificity and acupoint specificity. There are also drug amplification and two-way regulation function. The present study shows, to some extent, the advantages of point injection therapy as *distinct* from other therapies. The effects of its specific synergism and subtraction have been gradually recognized by researchers, but the mechanism of this effect is still unknown. Many researchers begin to find an effector that can directly prove the mechanism of acupoint injection from angle of neurophysiology, molecular biology and so on. This is the breakthrough point of the mechanism of acupoint injection [8].

Clinically used in the *treatment* of shingles, nettle-rash ,psoriasis, ringworm, dysmenorrhea, infertility, uterine fibroids, adnexitis, viral encephalitis in children, infant diarrhea, bronchial asthma in children.

3.6. Iontophoresis of Chinese Medicine

The iontophoresis of Chinese medicine leads the drug ions from human skin or mucous membrane to the lesion site by direct current. The use of DC electric field charge repulsion, the attraction of the role. Let the active ingredients of the drug pass through the pores of the skin and intercellular space filter into a specific site. So as to play a local anti-inflammatory, swelling, pain and other effects [9]. The traditional Chinese medicine iontophoresis has obvious curative effect and little adverse effect. The disadvantage is that when the medicine enters the body, it will suffer a lot of resistance, resulting in a limited amount of drug access [10].

Chinese medicine iontophoresis is often used in clinic for diseases of internal medicine, andrology, gynecological diseases, pediatric diseases, skin diseases, Department of orthopedics diseases, facial diseases and so on[11].

4. External treatment of Chinese Medicine

4.1. Application of Preparation Technique of External Medicine

At present, there are some commonly used forms of Chinese herbal medicine: emplastrum, gelata, plastics, lotion, plastics and embrocation, etc.

Table I.

emplastrum	Preparation is viscous and for sticking, by drugs and appropriate matrix mixture. Often coated on cotton or other backing material, sometimes back in material surface mounted on wear many holes. Affixed to the skin, gradually work at body temperature.
ointment	A semisolid preparation of a certain consistency made by the mixing of a drug with a suitable substrate. Commonly used matrix is divided into grease, water soluble and emulsion matrix.
gelata	Gel refers to uniform made of drugs with suitable excipients, thick liquid latex suspension or emulsion or semi solid preparation.
plastics	A liquid preparation made from a polymer film material for external application and capable of forming a film after being extracted or dissolved by suitable solvent and method. Chinese medicine liniment wound treatment efficacy significantly, rapid effect, convenient use, and good waterproof performance, clinically used for relieving blood and promote wound healing, but also can be used as a systemic treatment.
lotion	The pieces by appropriate extraction method made for skin or cavity smear or cleaning liquid preparation used. It is beneficial to the operation and absorption of drugs, to reduce the symptoms of cold, numbness, swelling, pain and dull complexion of limbs, so as to achieve the effect of activating blood circulation and removing blood stasis, warming the meridians, clearing away the toxin, and detoxifying.
embrocation	A solution, emulsion, or suspension made from ethanol, oil, or an appropriate solvent. Using sterile cotton swab dipped in liquid directly onto the wounds, every day can be repeated several times, should pay attention to avoid scratches, gently daub, should not be used for wound or mucous membrane.

4.2. Application of Percutaneous Penetration of Chinese Herbal Medicine in External Treatment

Traditional Chinese medicine transdermal technology is a technique which uses external medicine or compound to make skin preparation or add accelerant to promote the penetration of medicine into skin[12]. When most drugs enter the skin, the surface of the skin forms an impenetrable barrier that causes many drugs to absorb poorly and is less effective[13]. The development of transdermal enhancers has brought enormous benefits for external administration.

Modern medicine uses liposomes, peptides, pharmaceutical grade protein or modified methods to increase transdermal absorption of drugs. Liposomes have very similar characteristics to human skin. They can be used to penetrate the skin and enhance penetration of drugs into the skin, and are much better than other substrates without toxic side effects. Some chemicals can promote transdermal transport by chemical modification, increase or *change* functional groups into prodrugs, change the physical and chemical properties of drugs, improve the skin distribution behavior of drug molecules, and promote the transport of drugs through the stratum corneum[14].

5. Outlook

The advantage of external treatment of Chinese medicine is great, the external treatment of Chinese medicine is various, and it is used in many ways. It is directly to the clinic, and is widely used for indications. Nowadays, the technique of administration has gradually developed from a single mode of administration to a multi route compound administration, Nowadays external administration technology has gradually developed into a multi route compound drug delivery system from a single mode. The continuous development of transdermal drug delivery technology and external dosage forms provide vigorous vitality for the future development of external treatment of Chinese herbal medicine. Acupoint application, acupoint injection, fumigation, traditional Chinese medicine enema, Chinese medicine iontophoresis treatment is superior to the general method of some diseases. In addition, great progress has been made in promoting permeation and transdermal preparation of Chinese herbal medicine. At present, the penetration enhancer of natural skin penetrating agent is stronger than chemical penetrating agent, it has quick effect and low toxicity. Transdermal absorbers, combined with iontophoresis, ultrasonic introduction and laser, have greatly promoted the absorption of drugs. With the continuous development of microneedle transdermal delivery systems, macromolecular drugs (such as proteins, peptides, DNA, RNA) will be easier to penetrate through the skin, thereby enhancing the transdermal rate and absorption capacity of drugs[15].

At present, there are many problems in the evaluation of Chinese herbal preparations *in vivo*. Such as the difficulty of local tissue sampling, the detection of blood concentration is relatively troublesome, and the material basis of traditional Chinese medicine compound is unclear, which brings many difficulties to the quality evaluation of Chinese herbal preparations for external use. There are many kinds of instruments, materials and preparations used in external therapy, which are not standard. Such as enema bag used in clinic, hard texture, big stimulation, easy to cause pain, It can cause painful anal spasm, intestinal mucosa damage, bleeding, intestinal mucosa damage and other side effects. Application of percutaneous technique in traditional Chinese *medicine*, because the ingredients, complex composition, less content into the body, will affect the bioavailability. The use of external therapies of Chinese herbal medicine has been following *traditional* theories and methods. Traditional methods inevitably have some defects. Coupled with a number of methods, there are complex and difficult to operate problems, for the cure of the disease brings difficulties.

The development of external treatment of Chinese herbal medicine should focus on improving the technique of external treatment and strengthening the study of external therapies. The improvement of dosage forms is very important to promote the external *treatment* of Chinese Medicine. And to strengthen the study of transdermal delivery. Today, With the *emergence* of microsomes, liposomes and other dosage form and the application of micro molecule technology and nanotechnology have also created excellent conditions for the development of external treatment of Chinese herbal medicine. Speeding up the research and development of external therapeutic devices. Such as to ensure that the current of Chinese medicine iontophoresis instrument does not harm and damage to the human body, and the temperature of ion penetration, time is within the appropriate range, and the least stimulation is given to the route of *administration*. Strengthen the theoretical study of external treatment of Chinese

herbal medicine. There is still a lack of systematic understanding of the specific mechanisms of some external therapies. At the same time, the study also needs to embody the concrete guiding value of Chinese medicine theory in the external treatment. Strengthen holistic approach of ernal treatment, especially the study on the safety evaluation, drug absorption and mechanism of external treatment of Chinese herbal medicine. Establish a basic research system model suitable for external therapy, It lays the foundation for further research on external therapies.

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7.Reference

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