

# Research Progress in the Treatment of Chapped Eczema with Traditional Chinese and Western Medicine

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**Abstract:** Chapped eczema is a common dermatological disease in autumn and winter. It is often induced or aggravated by contact with detergents, causing chapping and pain, which affects walking and labor. Because the skin lesions are mainly keratinized, thick and chapped, the clinical treatment of this disease is difficult. Although there are many treatment methods, there is no effective drug treatment, and it is easy to recur. In order to make new progress in the disease and improve clinical. Therefore, the current research results and clinical efficacy of traditional Chinese and western medicine are discussed.

**Keywords:** Chapped Eczema, Traditional Chinese Medicine, Western Medicine, Treatment Progress

Chapped eczema is a common dermatological disease in autumn and winter. It is often induced or aggravated by contact with detergents, causing chapping and pain, which affects walking and labor[1]. Chapped eczema is a skin inflammatory reaction caused by a variety of internal and external factors, which is characterized by obvious exudation tendency, brown hyperpigmentation or hypopigmentation. It is mostly caused by chronic eczema, which leads to the loss of normal elasticity of the skin and more activities, and slowly expand to the proximal end to reach the palms and soles or spread to the back along the lateral margin of the fingers at the same time, the border is unclear, there are limitations, the skin around the nail is swollen, and the nails become thick and irregular[2].

## 1. Western Medicine Research

### 1.1 Etiology and Pathogenesis

The pathogenesis of chapped eczema is very complex, and there are interactions between internal and external factors. There are often external chemical stimuli, organic solvents, medium-concentration acids and alkaline substances will have a certain degree of irritation to the skin, which can cause the contact part to degrease, destroy the protective film of the normal skin, and cause the skin to appear dry, roughness, weakened toughness and other problems. Internal factors such as chronic digestive system diseases, gastrointestinal dysfunction, excessive fatigue, insomnia, mental stress, emotional changes and other mental changes, metabolic disorders, endocrine dysfunction or infection lesions can aggravate the condition of eczema or induce eczema. From the perspective of pathogenesis, chapped eczema is mainly a delayed allergic reaction caused by complex and repeated internal and external triggering factors. However, its etiology, the nature of the allergen, the characteristics of the immune response, and whether it is related to the IgE-mediated delayed phase response have not been fully elucidated. Some scholars have proposed that *Staphylococcus aureus* plays an important role in the incidence and progression of chronic hand eczema, which is also related to chronicity and disease severity[3]. These all illustrate the complexity of its pathogenesis.

### 1.2 Western Medicine Law

Antihistamine treatment: In clinical practice, antihistamines are mostly used to relieve itching. When an antihistamine is ineffective, it is necessary to use the two together or alternately, or to take a sedative. Because eczema is more itchy at night, it is best to take it once after dinner and before going

to bed. Ebastine is often selected in clinical practice. Ebastine, as a second-generation H1 receptor antagonist, can selectively inhibit histamine H1 receptors, which can inhibit the release of histamine, and it is not easy to pass through the blood-brain barrier and has a negative effect on the central nervous system. Nervous system side effects are less[4]. Or choose loratadine. Loratadine is a tricyclic drug, which can inhibit histamine-induced allergic symptoms and improve symptoms such as itching in patients[5].

**Glucocorticoid therapy:** Although glucocorticoids have quicker effects on anti-inflammatory, antipruritic and reducing exudation, they are prone to relapse after discontinuation, and their long-term use is likely to cause many adverse reactions. In clinical practice, topical glucocorticoids, such as compound clobetasol propionate cream, are often used in the treatment of eczema, dermatitis, and dermatitis. reaction[6].

**Antibacterial treatment:** In the study of skin flora of eczema patients, it was found that the detection rate of *Staphylococcus aureus* was 16.67%, the detection rate of *Staphylococcus epidermidis* was 26.83%, and the detection rate of *Malassezia* was 41.67%, which was higher than normal. The skin increased significantly, confirming the role of pathogen infection and skin barrier function destruction in the pathogenesis of eczema[1, 3], and topical antibiotics should be used in its treatment.

**Physical therapy:** those with hyperkeratosis and thickening of chapped eczema skin can be soaked in hot water for 10-15 minutes, and the thick keratinized epidermis is cut off with a razor blade, and then a layer of keratin peeling agent is applied, such as 15% Urea ointment, 10% salicylic acid ointment or 0.1% vitamin A ointment [7].

**Biological therapy:** The production of biological agents greatly improves the quality of life of patients with moderate to severe eczema and relieves the suffering of patients. Dupilumab is the most effective biological treatment for eczema[8]. Dupilumab reduces signs and symptoms in patients with moderate-to-severe atopic eczema in the short term, and the short-term safety results of clinical trials did not reveal new safety concerns. Evidence for the efficacy of most other immunosuppressive treatments for moderate-to-severe specific eczema is only of low or very low certainty, most studies are placebo-controlled and only assess short-term efficacy of immunosuppressants, lacking the Dupilumab and other biological treatments) or newer biological treatments, there is still great uncertainty about their efficacy and safety. Therefore, its long-term efficacy and safety in the treatment of moderate to severe eczema should continue to be evaluated.

**Ozone therapy:** Ozone (O<sub>3</sub>) is a natural, highly unstable atmospheric gas that can be rapidly decomposed into oxygen molecules and oxygen atoms. Scientific studies have shown that ozone is a strong oxidizing gas, high doses of ozone can cause severe oxidative stress leading to inflammation and tissue damage, and low concentrations of ozone can induce moderate oxidative stress and activate antioxidant pathways[9]. Therefore, ozone can improve the healing of eczema in patients[10], and its efficacy and recovery still need a large number of clinical experiments to prove.

## **2. Traditional Chinese Medicine Research**

### ***2.1 The Etiology, Pathogenesis and Syndrome Differentiation of Traditional Chinese Medicine***

Chapped eczema belongs to the category of "stubborn wet ulcer" in traditional Chinese medicine, which is called "broken hand and foot", "chapped sore", "stubborn wet ringworm", etc[11]. Chaoyuan Fang's "On the Origin and Symptoms of Diseases" says: "If there is less moisture and more air, the sputum will be dry, but itchy, and white shavings will come out when scratched, and it will be dry and painful. The poison gas of the Gu is shallow on the skin, hence the name Dry Fever Sore." Its etiology and pathogenesis can be summed up as deficiency of qi, blood, and body fluids, and externally related to wind, cold, dryness, and dampness. Zhao Bingnan believed that although the disease appeared externally but actually occurred internally, it was mostly caused by the spleen being damaged by diet, trapped by dampness and heat, and more caused by the evil of dampness and heat.

### ***2.2 Traditional Chinese Medicine Treatment Methods***

With the progress of traditional Chinese medicine, numerous excellent researches have enriched and developed the treatment methods for chapped eczema. The treatment methods are as follows:

The method of promoting blood circulation and expelling rash: Guan Xiao and others proposed that

the pathogenesis of chapped eczema is caused by prolonged stasis, consumption of yin and blood, and dryness and wind, and the skin is not nourished, treatment should be based on promoting blood circulation and removing blood stasis, eliminating wind and moisturizing dryness. Oral administration of Huoxue Xiaozhen Decoction (Peach kernel 12g, Salvia 30g, Angelica 15g, Chuanxiong 10g, White peony root 15g, Red peony root 15g, Cortex Moutan 30g, Rehmannia glutinosa 20g, Forsythia 15g, Fresh white skin 15g, Tribulus terrestris 10g, Kochia kohlraubi 15g, licorice 6g) has the effects of promoting blood circulation, eliminating rash, moisturizing dryness and relieving itching. When treating chapped eczema of hand with blood stasis and wind-dryness, it can significantly improve the area of skin lesions, chapping, keratinization, and itching[12].

Heat-clearing and damp-dampening method: Ma Lin, Kong Lianwei and others believe that the cause is the accumulation of damp-heat for a long time, the long-term illness injures the blood, the blood deficiency produces wind and dryness, and the skin loses nourishment. Therefore, the self-made dehumidification decoction (Shengdi 15g, Moutan Bark 15g, Cicada Slough 15g, Atractylodes Root 15g, Treats 15g, Kochia Kochia 20g, White Fresh Skin 15g, Sophora Radix 10g, Fangfeng 15g, Nepeta 15g, Licorice 15g, Alisma 15g, Poria 15g) mainly clears heat, nourishes blood and moistens dryness, dispels wind and relieves itching, and relieves dampness and strengthens spleen[13].

Expelling wind and nourishing blood: Qufeng Dihuang Wan comes from the Qing Dynasty "Golden Mirror of Medicine: The Essentials of Surgical Heart Method", which mainly treats goose palm wind, "for no reason, the palm is dry and itchy, and it is even dry and slightly painful." The author does not advocate the use of excessive drugs such as glucocorticoid ointment and avitamin A capsules. Most patients take Qufeng Dihuang Decoction on the basis of addition and subtraction, and cooperate with correct nursing methods, the clinical cure rate is high[14].

The method of warming potential and removing blood stasis: Liao Jiantang advocated that "yin cannot be conquered alone, and peace is the measure, and yang will not suffer too much, but it must be secret." and "prolonged illness must be stasis", its clinical use of warming yang to subdue yang, promoting blood circulation and removing blood stasis has achieved excellent curative effect in the treatment of chapped eczema of yang deficiency and blood stasis type[15]. The specific prescription is as follows: Cooked aconite 15g, cassia twig 30g, white peony root 15g, licorice 12g, peach kernel 10g, safflower 5g, dried ginger 20g, hyssop 15g, atractylodes 15g, tuckahoe 15g, phellodendron 5g, raw keel 30g, raw oyster 30g, angelica 10g, Asarum 6g, dogwood 15g.

Nourishing yin and expelling wind: Professor Yan Xuewen believes that the basic pathogenesis of chronic chapped eczema is the accumulation of rheumatic-heat toxins in the skin. The treatment of chronic chapped eczema is based on nourishing yin and moisturizing dryness, nourishing blood and expelling wind. The prescription of "Additional Nourishing Blood and Moisturizing Drink", which is taken orally and washed externally for treatment, has a good effect[16].

Fire acupuncture: Fire acupuncture has the functions of promoting blood circulation and removing blood stasis, clearing away heat and removing dampness, clearing away heat and removing dampness, which is in line with the root cause of this disease. Fire acupuncture can quickly eliminate wind, dampness, heat, poison, and carrion in lesions, and promote the healing of skin lesions. It has the functions of removing blood stasis and removing rot, promoting the metaplasia and growth of new flesh, and repairing the skin[15].

### 3. Summary and Outlook

Chapped eczema is a test of daily dermatological practice. Due to the thick stratum corneum and the influence of many external factors, clinical treatment often affects the absorption of drugs, thereby affecting the therapeutic effect. The course of the disease is lingering and can last for several years or even longer. It occurs frequently in the center of the palms or soles of the feet. Therefore, it is very easy to affect work and daily life, and it is easy to recur. At present, there are various traditional Chinese medicine treatment methods for this disease, but each doctor has his own unique opinion when using clinical medicine. Only by grasping the etiology and pathogenesis of this disease can the dialectical be accurately diagnosed and the medicine can be effective, prescriptions and medicines blinded the eyes, ignoring other symptoms of patients. A person is a whole, only by adjusting the whole and applying dialectically, can a satisfactory result be achieved, otherwise the clinical curative effect will backfire. Compared with western medicine for external use, traditional Chinese medicine has not yet formed a unified external drug preparation that is popular throughout the country, which is one of the defects that must be mentioned in the treatment of chapped eczema. Fire acupuncture and other traditional Chinese

medicine treatment methods have also enriched the treatment methods of this disease, and the integration between it and Western medicine treatment methods is also tried in clinical practice, and the clinical effect is considerable. Compared with western medicine, there are more studies on the pathogenesis and mechanism of this disease, but its etiology and pathogenesis are still being explored, many of which have not yet been clarified, and the treatment plan of this disease is still mainly formulated according to clinical symptoms. Although western medicine preparations have a quick onset of action, they have many adverse reactions, so there is no way to use them for a long time. Physical therapy plays a great role in its treatment, but it cannot completely treat the disease independently, and needs to be combined with other therapies. Although both Chinese and Western medicine have achieved certain clinical efficacy, they still have their own shortcomings. In the process of studying its pathogenesis, we should continue to explore the comprehensive treatment method of integrated traditional Chinese and Western medicine, take the essence of it, avoid its shortcomings, and double the therapeutic effect. For this disease, daily care is particularly important, avoiding friction and avoiding contact with allergic substances (metalworking fluids and skin care products are the most important exposures[17]). We should better choose Chinese and Western medicine treatment methods, so that the combination of the two can play a more positive role. According to the different clinical characteristics of patients, different Chinese and Western medicine internal medicines, external medicines and physical therapy are selected to effectively cooperate. Do our best to meet the requirements of safety, rapidity, no adverse reactions and significant clinical effects, and improve the cure rate of the disease. At this stage, it is still necessary to conduct a more in-depth analysis of its pathogenesis and treatment methods, test the effectiveness of existing treatment methods, develop new treatment methods, and make further efforts to relieve the pain of patients and improve the happiness index of patients.

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