

Discussion on the Etiology and Pathogenesis of Eczema from the Perspective of Zangxiang Theory

Xi Li, Zhenlin Chen*

Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

*Correspondence Author

Abstract: *Wet eczema corresponds to eczema in Western medicine and represents one of the most common and challenging conditions in dermatology. It is characterized by recurrence, pruritus, exudation, symmetry, polymorphic lesions, and a tendency toward chronicity. Western medical treatment primarily relies on corticosteroids and antihistamines, but therapeutic effects are inconsistent, and significant adverse reactions often occur after discontinuation of corticosteroids. Therefore, compared with Western medical treatment, TCM syndrome differentiation treatment offers distinct characteristics and advantages. Taking the theory of Zangxiang as the main entry point, this paper explores the etiology and pathogenesis of wet eczema from the perspective of Zangxiang, aiming to better understand and treat eczema from the aspects of etiology and pathogenesis.*

Keywords: Eczema, Zang-Xiang, Traditional Chinese Medicine.

1. Introduction

Eczema is an inflammatory skin disease caused by multiple internal and external factors. Studies indicate that its prevalence in China reaches 7.5% [1], with a gradual upward trend in recent years due to rapid societal development and climate changes. Western medicine classifies eczema into acute, subacute, and chronic phases based on clinical characteristics, though its etiology and pathogenesis remain unclear. It is generally considered the result of multiple internal and external factors, including impaired skin barrier function, immune dysfunction, psychological stress and anxiety, external allergen exposure, microbial infections, and environmental temperature or humidity fluctuations. Treatment primarily aims to control symptoms and reduce recurrence, with topical corticosteroids serving as the main therapeutic approach. While this therapy demonstrates proven efficacy for eczema, long-term use can lead to dependency. Discontinuation may trigger rebound effects, exacerbating the condition and hindering complete resolution. Adverse reactions such as skin hyperpigmentation, atrophy, or telangiectasia may also occur.

Traditional Chinese medicine (TCM) has treated eczema for millennia. Tailored to different disease stages, it employs both internal and external herbal therapies, offering high efficacy, low toxicity, flexible application, and reduced recurrence rates [2]. Eczema falls under the category of “infiltrating sores” in TCM. Throughout history, physicians have assigned different names and descriptions based on the skin manifestations and affected areas, such as “infiltrating sores,” “damp sores,” “blood wind sores,” “facial oil wind,” “ear-spinning sores,” “nipple wind,” and “kidney sac wind.” The etiology of eczema is predominantly discussed in terms of three pathogenic factors: wind, dampness, and heat. Regarding the involved zang-fu organs in its pathogenesis, medical opinions vary: some focus on the heart [3], others on the spleen [3], while some address the heart, spleen, lung, and liver [4]. Modern medical understanding of eczema’s etiology primarily considers internal factors: organ deficiency, constitutional differences, irregular diet, or excessive consumption of pungent and stimulating foods. These lead to spleen-stomach impairment, impaired spleen function, and

internal damp-heat generation. Concurrent exposure to external pathogens results in the interaction of wind, dampness, and heat pathogens, infiltrating the skin. These pathogenic factors of wind, dampness, and heat are categorized as internal or external. Internal wind is often attributed to the liver, internal dampness to the spleen, and internal heat to the heart. As stated in the Essential Prescriptions Worth a Thousand Gold: “The five viscera and six bowels correspond internally to the bone marrow and externally to the skin, hair, and flesh. “The pathogenesis of eczema primarily involves dysfunction of the zang-fu organs. Factors such as excessive heart fire, spleen deficiency with dampness accumulation, or blood deficiency with wind-dryness can cause wind, dampness, and heat toxins to invade the skin, resulting in eczema [5]. The Zang-Xiang theory offers a holistic perspective on disease centered around the five zang organs and six fu organs. This article explores the relationship between zang-fu organ functions and eczema pathogenesis from the perspectives of the heart, liver, spleen, lung, and kidney, based on Traditional Chinese Medicine’s Zang-Xiang theory. This approach facilitates a deeper understanding of eczema’s etiology and pathogenesis, thereby enhancing its treatment.

2. The Relationship Between the Heart and Eczema

The Treatise on the Origins and Manifestations of Various Diseases states: “Infiltrating sores arise when wind-heat resides in the heart and manifests on the skin.” The Suwen: Mysteries of Disease Origins states: “All painful, itchy sores and ulcers belong to heart fire. “The Standard Rules for Diagnosis and Treatment: Surgical Medicine states: “Shengma Decoction treats wind-heat in the heart that causes widespread skin ulcers.” These texts clearly identify heart fire as the root cause of skin ulcers.

The heart’s primary functions are governing blood vessels and overseeing mental activities. Therefore, treating eczema from a cardiac perspective requires addressing both “blood” and “spirit.” “Heart qi propels blood to fill the vessels, circulating ceaselessly. Blood vessels transport the essence of food and drink, nourishing the limbs and bones to sustain bodily

functions. Regarding blood, blood heat, blood deficiency, blood dryness, and blood stasis all play significant roles in eczema pathogenesis [6]. If the heart's function governing blood vessels becomes disordered or heart fire becomes excessive, it can lead to intense heat in the blood. The fire-heat pathogens in the blood vessels injure the blood vessels, forcing sweat to overflow, resulting in skin erosion and oozing. If the disease persists and injures yin, heart blood is secretly depleted. Blood deficiency causes the pulse to become (thready), and the skin loses its nourishment, leading to dryness, flaking, and itching. During the chronic phase, blood deficiency and pulse sluggishness generate stasis, phlegm obstructs the meridians, and blood fails to nourish the skin, resulting in coarse, scaly lesions. Thus, the external manifestations of heart-related blood vessel dysfunction vary across different stages of eczema.

The heart governs mental clarity, overseeing human perception, emotions, cognition, and volition. Blood nourishes the spirit, while the spirit in turn regulates the body's physiological functions. Patients suffering from eczema with frequent itching often experience restlessness and agitation. In severe cases, insomnia and inadequate nourishment of the spirit may occur, exacerbating symptoms. Clinically, it is common to observe accompanying symptoms such as insomnia, irritability, vivid dreams, and mental agitation. Emotional imbalance, excessive heart fire, and inadequate nourishment of the spirit can all be considered causative factors for eczema. Furthermore, eczema is closely related to the spleen, lung, and kidney organs. Deficiency of the heart spirit can also impair other organs [7]. Therefore, when diagnosing and treating eczema clinically, it is essential to use herbs that clear the heart, resolve toxins, nourish blood, and relieve itching. This approach improves skin lesions, regulates the overall condition, and achieves the goals of detoxification and itch relief.

3. The Relationship Between Liver and Eczema

Eczema patients often present with symptoms such as rough, thickened skin, lichenification, desquamation, and in some cases, scratch marks, crusting, hyperpigmentation, and thickened or deformed fingernails/toenails, accompanied by paroxysmal itching. The liver is the organ responsible for storing blood, regulating blood volume, and maintaining its quality. Chronic itching disrupts sleep and appetite in eczema patients, depleting sources for qi and blood generation. Insufficient blood transformation fails to nourish liver blood, leading to deficiency. Deficient liver blood fails to nourish tendons, nails, and skin, causing pale or sallow complexion and locally rough, thickened, lichenoid skin. Insufficient liver blood impairs the liver's storage function. As the liver governs tendons and nails are the residue of tendons, malnourished nails become dull and brittle, with rough, scaly skin. Weak liver blood further diminishes its nourishing capacity, generating wind from blood deficiency. "Without wind, there is no itch"—skin deprived of nourishment flakes and itches unbearably.

The liver governs the free flow of qi and stores blood, regulating emotional states and qi circulation. Unresolved emotional distress leads to stagnant liver qi. Qi is the commander of blood. When liver qi stagnates and remains

unresolved over time, it inevitably leads to internal blood stasis. Alternatively, prolonged illness may exhaust the sources for the generation of qi and blood, causing impaired blood circulation and the internal formation of blood stasis. This stasis obstructs the skin, depriving it of nourishment. Blood stagnation, the accumulation of blood stasis, and wind arising internally manifest on the skin, resulting in rough and thickened skin [8]. Particularly in varicose vein patients, eczema frequently occurs on the lower legs. Impaired circulation in the lower extremities leads to blood stasis obstructing the collaterals, preventing qi and blood from nourishing the skin. This manifests as skin ulcers, rough and thickened lesions, dark discoloration, desquamation, paroxysmal itching, a dark purple tongue with ecchymoses, and a pulse. Additionally, prolonged illness often persists due to emotional fluctuations, leading to phlegm-dampness accumulation, impaired blood circulation, or yin deficiency with blood dryness. This causes stasis obstructing the meridians, deficiency-stasis generating wind, and inadequate skin nourishment, resulting in rough, thickened, and dry skin.

Therefore, treatment should incorporate herbs that nourish blood and moisturize the skin, eliminate dampness, and relieve itching. Additionally, herbs that soothe the liver, regulate qi, nourish blood, and soften the liver may be added. As the liver is a strong organ that thrives on smooth flow and abhors stagnation, caution must be exercised with herbs that excessively drain liver qi for patients experiencing anxiety or irritability. When liver qi flows smoothly, the body's qi circulation becomes unobstructed, and the movement of qi and blood harmonizes. This facilitates better absorption of medications and aids in the recovery of skin lesions.

4. The Relationship Between the Spleen and Eczema

The Collection of Insights on Surgical Diseases states: "Damp-toxin sores arise from deficiency of the spleen and stomach, with damp-heat descending to cause numbness in the muscles." This indicates that deficiency of the spleen and stomach, coupled with the proliferation of damp-heat, can overflow into the muscles and limbs, manifesting as eczema. "What exists internally must manifest externally." Eczema, though appearing as diverse external skin lesions, fundamentally stems from internal disharmony of qi, blood, yin, and yang. Dampness is the key pathogenic factor in eczema, and its generation is inextricably linked to spleen deficiency [9]. The Suwen: Chapter on the Great Treatise on Ultimate Truth states: "All dampness-related swelling and fullness belong to the spleen," indicating a close relationship between dampness and the spleen.

The spleen governs the distribution and transformation of bodily fluids, serving as the pivotal hub of fluid metabolism. When spleen qi is deficient and loses its transporting function, it fails to transform dampness. Damp pathogenic factors then proliferate, infiltrating the skin, obstructing the pores, and manifesting externally as swelling and oozing—symptoms indicative of spleen deficiency with excessive dampness. When the spleen is afflicted by dampness, its qi also becomes deficient. Prolonged stagnation of dampness can generate heat, manifesting in skin lesions with redness, swelling, and burning sensations—signs of damp-heat accumulation in the

skin. Prolonged illness depletes yin fluids, injuring yin and transforming into dryness, manifesting as thickened, desquamated skin lesions. Dampness, being a heavy, viscous pathogen, tends to recur and prolong the disease course, presenting in diverse forms. Therefore, eczema treatment centers on strengthening the spleen, combined with spleen-tonifying and dampness-expelling, clearing damp-heat, and nourishing blood to moisturize dryness [10]. Spleen deficiency generates dampness internally; the sticky nature of dampness further obstructs spleen function. As the foundation of acquired constitution and the source of qi and blood production, a spleen impaired by dampness fails to nourish the skin, leading to recurrent eczema and a vicious cycle. Thus, “spleen deficiency” is the root cause of eczema. To treat the disease at its source, spleen-centered approaches are essential.

Throughout eczema treatment—whether in acute or chronic phases—medicines that fortify the spleen and dispel dampness can enhance efficacy. Normal organ function, balanced fluid metabolism, and sufficient postnatal qi and blood production positively influence disease resolution, strengthen the body’s vital energy, and restore resilience.

5. The Relationship Between the Lungs and Eczema

The lungs govern the skin and hair. When lung qi is robust, the pores remain tightly closed, repelling external pathogens. Deficient lung qi allows wind-cold, damp-heat, and toxic pathogens to invade internally. This impairs the distribution of defensive qi and disrupts fluid metabolism, predisposing the body to damp sores. The lungs govern qi, and the defensive qi specifically regulates the opening and closing of the pores and defends against external pathogens. When lung qi is deficient, the pores lose their regulatory function, and the body’s defense against pathogens weakens. Where pathogens gather, qi is inevitably deficient. Individuals susceptible to wind, dampness, or heat pathogens, or those with a constitutional tendency toward damp-heat, are prone to developing eczema.

The Suwen: Treatise on Meridians states: “When fluids enter the stomach, they disperse vital essence upward to the spleen. The spleen disperses essence upward to the lungs, regulating water pathways and transporting downward to the bladder. Thus, water essence permeates throughout, the five meridians function in concert, harmonizing with the yin-yang of the five viscera and the four seasons—this is the natural order. After water and grains are received and digested by the stomach, they transform into essence and qi that are transported to the spleen. Through the spleen’s transformation and transportation, the essence of water and grains is distributed throughout the body, with part ascending to the lungs. The lungs govern the regulation of water pathways. Through their dispersing and descending functions, they distribute body fluids to the upper body and throughout the body, and transport them downward to the kidneys and bladder. This ensures that the essence of water and grains is distributed throughout the body, flowing through the meridians of the five zang organs. It also allows for corresponding adjustments in response to the changes in the four seasons, climate, and the yin-yang of the five zang organs. This is the process of the generation, distribution, and excretion of body fluids. The

lungs’ regulation is crucial for fluid distribution, influencing the entire process. Thus, abnormalities in fluid metabolism are closely linked to dysfunction in lung physiology. Conversely, lung dysfunction can disrupt other organs’ functions, leading to damp sores or affecting their progression. [11] The spleen and stomach transform and transport the essence of food and drink. Through the lungs’ dispersing and descending actions, this essence is distributed throughout the body via the triple burner. The lungs are paired with the skin and hair, while the spleen governs the limbs. When body fluids circulate normally, the skin remains smooth and well-nourished. However, if heat pathogens injure the lungs and damage the skin and hair, or damp pathogens impede the spleen and deprive the muscles of nourishment, damp-heat combines to manifest as eczema.

The pathomechanism of damp sores is characterized by dampness, with the disease location in the skin. The lungs govern the skin and hair while also regulating water metabolism, transforming dampness through qi transformation. Therefore, treatment requires promoting lung function and transforming dampness. This method focuses on the close connection between skin eruptions, the lungs, and dampness, anchoring in the triple energizer system. It utilizes the pathways of the skin pores and hair to transform dampness, ensuring smooth qi flow in the upper, middle, and lower energizers, normal fluid metabolism, and unimpeded water pathways. Thus, in treating eczema, intensifying the method of promoting lung function and transforming dampness can accelerate symptom relief, shorten the treatment course, and yield superior results.

6. The Relationship Between the Kidneys and Eczema

The connection between the Kidney and the skin and hair primarily occurs through the defensive qi. The Ling Shu • Ben Zang states: “The Triple Energizer and Bladder correspond to the pores and fine hairs.” The Triple Energizer is the “distinguished messenger of primordial qi” (Nan Jing), while the Foot-Taiyang Bladder Meridian serves as the barrier of the six meridians. Its yang qi (defensive yang) originates from the Kidney. Under the transformation of the bladder qi, this yang energy is distributed through the triple burner to warm and nourish the skin pores and body hair. The kidneys represent the foundation of innate constitution. Among the causes of damp sores, an innate predisposition to weakness is a significant factor. Individual differences in innate constitution also influence subsequent growth and development. If one has an inherently weak constitution and is further affected by the three pathogenic factors of wind, dampness, and heat, this disease is likely to manifest. The kidneys govern water metabolism, which is closely linked to their qi-transformation function. Insufficient kidney qi or deficient kidney yang leads to impaired qi-transformation and diminished warming effects, causing stagnation of dampness. Furthermore, since damp sores tend to recur frequently, chronic illness eventually affects the kidneys, creating a mutually reinforcing relationship between the two. Clinically, this pattern is commonly seen in individuals with a congenital allergic constitution or in cases where damp sores have persisted long enough to involve the kidneys.

The dampness in skin conditions is a yin pathogen. When kidney yang deficiency fails to warm and nourish spleen yang, dampness cannot be controlled. Yang qi stagnates, and damp pathogens accumulate internally. This is commonly seen in patients with chronic skin conditions and kidney yang deficiency, where skin lesions often appear thickened, rough, and dark in color. Liver and kidney share a common origin. Prolonged illness depletes essence and blood, depriving the skin of nourishment. Blood deficiency further generates wind and dryness. This pattern is common in patients with kidney yin deficiency, presenting with dry, desquamating lesions, hyperpigmentation, and purplish-brown skin.

The kidneys govern the exterior, open the pores, and store the body's nutritive and defensive qi. They also govern hibernation, maintain their position, store essence, consolidate the foundation, regulate the ministerial fire, and govern body fluids to assist the lungs and spleen in transforming and transporting water and dampness within the skin [12]. Therefore, clinically, for damp sores, treatment from the perspective of the kidneys may be considered. As the foundation of innate constitution, kidney yang deficiency and kidney yin deficiency are commonly observed in elderly patients. Thus, elderly patients with damp sores should address the root cause by tonifying the kidneys and promoting yang energy. When yang energy functions properly, it can transform damp pathogens; tonifying the kidneys and nourishing yin ensures sufficient yin and blood to nourish the blood and moisten dryness.

7. Conclusion

This article analyzes the pathogenesis of eczema from the perspective of zang-xiang theory, briefly discussing the relationship between eczema and the five zang organs—liver, heart, spleen, lung, and kidney. Although the five zang organs are discussed separately, they are interconnected and influence each other. Eczema manifests externally but is closely linked to the internal zang-fu organs. The five zang organs form an integrated system. Diagnosis of chronic eczema should not be confined to a single organ but should adopt a holistic perspective, comprehensively examining both external causes and internal factors. Furthermore, the onset of eczema often involves the lungs, liver, and kidneys. These organs interact through mutual generation and restraint; prolonged illness may lead to transformations and mutual influence. Tailoring treatment to the individual and adapting to seasonal changes holds equal significance in managing eczema. This approach embodies a holistic perspective, emphasizing the unity of the individual with their natural environment. Rather than focusing solely on subjective symptoms and localized skin lesions while rigidly applying common clinical classifications, greater emphasis should be placed on the location of eruptions, seasonal patterns, meridian distribution, and organ involvement. Deeply exploring etiology and analyzing pathogenic factors alongside organ-related factors fosters a comprehensive, integrated diagnostic approach. This facilitates preventing disease progression and enhances clinical efficacy.

References

- [1] Li Linfeng, Gao Xinghua, Gu Heng, et al. Guidelines for the Diagnosis and Treatment of Eczema (2011 Edition) [J]. Chinese Journal of Dermatology, 2011(01):5-6.
- [2] Li Guangrui, Yang Sifu, Ouyang Heng. Challenges in Eczema Treatment and Traditional Chinese Medicine Approaches [J]. Chinese Journal of Integrative Dermatology and Venereology, 2010, 9(04):253-255.
- [3] Wang Yuming, Zhao Jiping, Zhang Xiaohong, et al. Acupuncture Treatment Approach for Eczema Based on Heart-Spleen Theory [J]. Chinese Journal of Clinical Physician, 2012, 40(12):69-71.
- [4] Wei Jie, Dong Shizhou, Qiu Lihui, et al. Treatment Approach for Chronic Eczema Based on Liver-Spleen Theory [J]. Journal of Yunnan Traditional Chinese Medicine and Chinese Medicine, 2012, 33(07):12-13.
- [5] Zhang Xiaohong. Etiology, Pathogenesis, and Clinical Research of Eczema [J]. Chinese Clinician, 2011, 39(02):14-16.
- [6] Kang Runfang, Jin Haoran, Yang Enpin. Analysis of Eczema Treatment Based on Blood Theory [J]. Journal of Liaoning University of Traditional Chinese Medicine, 2014, 16(04): 156-157.
- [7] Du Jian, Wang Hao, Shao Qiting, et al. Analysis of the Concept "The Heart Governs Spiritual Clarity"—"Presiding Over the Soul and Spirit, and Encompassing Will and Intent" [J]. Chinese Journal of Basic Medical Sciences in Traditional Chinese Medicine, 2014, 20(01): 11-13.
- [8] Liu Xuewei. Analysis of Treating Chronic Eczema from the Perspective of Liver and Spleen [J]. Chinese Journal of Basic Medicine in Traditional Chinese Medicine, 2013, 19(05): 501-502.
- [9] Li Cuijuan, Gong Zhendong. Analysis of Treating Emotional Disorders from the Perspective of the Spleen [J]. Shizhen Guoyi Guoyao, 2018, 29(04): 930-931.
- [10] Ma Yuhang, Lu Yiping. Analysis of Eczema Treatment Based on Spleen Theory [J]. Chinese Journal of Clinical Medicine, 2022, 14(13): 112-114.
- [11] Zhao Haiyan, Guo Yanling, Xu Qinxiu. Wind Syndrome of Zang-Fu Organs in the Huangdi Neijing and Its Clinical Manifestations [J]. Chinese Journal of Basic Medicine in Traditional Chinese Medicine, 2005(04):304-306.
- [12] Li Jiangfeng, Wang Jin. A Study on the Treatment of Chronic Eczema Based on the Kidney [J]. Chinese Journal of Basic Medicine in Traditional Chinese Medicine, 2019, 25(03): 396-398.