

Liu Shaowu's "Exterior Region" Theory and Clinical Cases of Treating Cold-Damp Type Allergic Rhinitis with Ephedra-Based "Diaphoresis Method"

Huixia Ji¹, Xiaoxu Liu², Gao Liu²

¹Weifang People's Hospital, Weifang 261041, Shandong, China

²Weifang Commercial College Shandong Province, Weifang 261061, Shandong, China

Copyright: © 2026 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Based on Liu Shaowu's "Exterior Region" theory in the "Three Regions and Six Diseases" doctrine, combined with Zhang Zhongjing's therapeutic principle of "diaphoresis method", this paper explores the TCM pathogenesis and treatment methods of cold-damp type allergic rhinitis. It points out that the core pathogenesis of the disease is the invasion of wind-cold-damp pathogens into the exterior region, leading to stagnation of defensive Yang and obstruction of orifices and collaterals. Through three typical clinical cases (involving symptoms such as nasal itching, nasopharyngeal tube obstruction, nasal congestion with headache), modified ephedra-based formulas such as Mahuang Decoction, Moxing Shigan Decoction, and Xiaoqinglong Decoction are used, combined with drugs for inducing resuscitation, resolving dampness, and promoting blood circulation, to expel pathogens through diaphoresis. Clinical observations show that expelling pathogens with the "diaphoresis method" can effectively relieve symptoms with significant curative effect. This study provides new ideas and methods for expanding the application of the "diaphoresis method" in the treatment of sinusitis.

Keywords: Allergic rhinitis; Three regions and six diseases; Exterior region; Diaphoresis method; Ephedra-based formulas; TCM treatment

Online publication: Mar 11, 2026

1. Introduction

Zhang Zhongjing, the medical sage, and Sun Simiao, the medicine sage, used the diaphoresis method to treat exterior syndromes in their works *Treatise on Febrile and Miscellaneous Diseases* and *Qianjin Prescriptions*, creating famous formulas such as Mahuang Decoction and Xiaoxuming Decoction. These set a model and reference for the treatment of superficial diseases in later generations and laid the foundation for the treatment of superficial diseases using formula-syndrome theory. The ancients mostly used the diaphoresis method for

treating exterior syndrome caused by exogenous pathogens, but rarely mentioned its application in the treatment of “sinusitis”. The authors applied the principle of Zhang Zhongjing’s “diaphoresis method” for Taiyang disease, combined it with Liu Shaowu’s “Exterior Region” theory in the “Three Regions and Six Diseases” doctrine, classified wind-cold-damp type allergic rhinitis into the category of exterior syndrome in TCM, and applied ephedra-based formulas in the clinical treatment of allergic rhinitis, achieving good curative effects. The typical cases are now introduced as follows.

2. TCM pathogenesis of wind-cold-damp type allergic rhinitis

2.1. Pathogen invasion path

The inducing factors of cold-damp type allergic rhinitis include both external and internal causes. External causes are mostly the invasion of wind-cold-damp pathogens from the outside, gradually advancing, mostly entering through the skin and respiratory tract, damaging defensive Yang; or entering through the mouth via diet, with cold-damp pathogens directly attacking the middle Jiao, damaging the spleen-kidney Yang, resulting in failure of the middle Jiao Yang to warm the lung-defense. Internal causes are mostly congenital insufficiency of lung-defense or congenital weakness of spleen-stomach Yang, leading to insufficient resistance of the human body to external pathogens, resulting in the struggle between external pathogens and healthy Qi in the exterior region, which persists and leaves residual pathogens in the exterior region.

2.2. Lesion location

The nose is the external orifice of the lung, and the lung governs the “exterior of the whole body”. The skin interstices, hairs, nasal cavity, tracheal mucosa, and various meridians of the head all belong to the exterior region. Wind-cold-damp pathogens invade the human body through the skin. “Wind is the leader of all diseases”, attracting cold-damp pathogens to enter the body. The lung-defense rises to resist pathogens, and defensive Yang is stagnated. In addition, cold is stagnant and constricting, causing contraction of skin pores. “When pathogens initially invade the skin, the hairs stand on end”, forming self-defense; if external pathogens are strong, the interstices open. When wind-cold-damp pathogens enter the body through the mouth and nose, the lung-defense resists them, and Yin pathogens such as wind-cold-damp-heat are transformed into “nasal discharge” after being warmed by the lung-defense of the nasal cavity. If wind-cold-damp pathogens invade the respiratory tract through the nasal cavity, they are transformed into phlegm after being warmed by the lung-defense of the respiratory tract. As stated in *Su Wen·Pibu Lun Pian* No. 56: “Therefore, when all diseases initially occur, they must first invade the skin and hair; when pathogens attack, the interstices open, and then invade the collaterals”. If they remain, they will further invade the meridians, Zang-fu organs, and intestines and stomach.

2.3. Pathogen tendency

Wind invades Yang positions, is dispersive, and is most likely to break through the human body’s defense; cold pathogens constrict and stagnate, damaging Yang Qi; damp pathogens are sticky and lingering, blocking Qi movement. The combined invasion of wind-cold-damp pathogens is most likely to linger in the “exterior region”, leading to the failure of defensive Yang to normally regulate the opening and closing of the exterior defensive Qi, resulting in dysfunction of the exterior defense. Zhuang Jingwen et al. studied the role of Yang Qi in the development of rhinitis and found that obstruction of Yang Qi transportation leads to the occurrence of the disease,

and harmonious Yang Qi is the key to treating this disease^[1]. Therefore, pungent, bitter, and warm TCM medicines are used to dispel the “stagnant nature” of cold-damp, and the “diaphoresis method” with ephedra and cassia twig is used to dispel wind pathogens and eliminate their “dispersive nature”.

3. Liu Shaowu’s “exterior region” theory in the “three regions and six diseases” doctrine

Liu Shaowu combined Zhang Zhongjing’s six-meridian syndrome differentiation with Zang-fu syndrome differentiation to create the “Three Regions and Six Diseases” theory. The “Three Regions” divide the human body into three parts: “Exterior Region”, “Interior Region”, and “Pivot Region”. Among them, all parts in contact with air and the outside world are classified as the “Exterior Region”; the digestive tract in contact with food belongs to the “Interior Region”; the part between the “Exterior Region” and “Interior Region” in contact with Qi and blood belongs to the “Pivot Region”. In addition, the excitatory stimulation response formed by the three regions (Exterior, Interior, Pivot) accepting pathogenic factors is called a positive response, and the inhibitory stimulation response is called a negative response. Each region has two types of responses (excitatory and inhibitory), hence the name “Six Diseases”^[1].

4. Ancient and modern views on the diaphoresis method in treating superficial diseases

The “diaphoresis method” is a therapeutic method that uses the dispersive nature of pungent medicines to force external pathogens residing in the interstices to be expelled with sweat. Su Wen·Re Lun states: “When the meridians of the three Yang are all affected by the disease but have not invaded the Zang organs, they can be cured by diaphoresis”. Su Wen·Yin Yang Ying Xiang Da Lun says: “For those with pathogens, soak the body to induce sweat; for those in the skin, induce sweat to expel them”^[2]. Zhang Xichun believed that “the diaphoresis method, in Western medicine terms, promotes skin excretion, regulates body temperature, and eliminates toxins. For sweating opens the pores, accelerates blood circulation, and pathogens and toxins are eliminated accordingly”. Yang Suqing et al. found through sorting out that Zhang Zhongjing’s “diaphoresis method” has good curative effects in the treatment of many skin diseases such as psoriasis. It can be seen that both the ancients and modern clinical medical research have shown that in the treatment of superficial diseases, using the “diaphoresis method” to expel pathogens from the superficial part of the body is a correct approach for treating superficial diseases.

5. Clinical cases

5.1. Case of nasal itching and itching of the inner canthi

Wang Moulei, male, 45 years old, visited the clinic on August 26, 2023. He had a history of allergies to pollen, peculiar smells, etc. He liked sea fishing. For more than 10 years, every time he encountered a sudden drop in temperature, strong wind blowing on his face, or exposure to allergens such as pollen, he would have clear nasal discharge, nasal itching, and frontal distending pain. He was diagnosed with allergic rhinitis by Western medicine and treated with antihistamines such as loratadine and cetirizine, but the effect was temporary and not obvious.

(1) Main complaint

Severe nasal and inner canthi itching for 12 years, aggravated for 1 month.

(2) Current symptoms

Nasal itching, itching of the inner canthi and eyes, nasal congestion, profuse clear thin white nasal discharge, inability to distinguish the fragrance of food, tightness of the face, slight thirst, normal appetite, sticky stool, dark tongue with white slippery coating, tight and slippery pulse with force on deep palpation, and gathered guan pulse on the right. Nasal endoscopy showed hyperemia of the nasal mucosa.

5.1.1. First visit on August 26, 2023

(1) Syndrome differentiation

Wind constraining Yangming, cold-damp lingering in the lung.

(2) Treatment principle

Dispel lung dampness, dispel cold, and induce resuscitation. Modified Maxing Shigan

(3) Decoction was prescribed

Ephedra 12 g, bitter apricot kernel 12 g, raw gypsum 30 g, licorice 10 g, *Pogostemon cablin* 30 g, asarum 6 g, magnolia flower 15 g, *Angelica dahurica* 15 g, *Pinellia ternata* 12 g. 5 doses.

5.1.2. Second visit on August 31, 2023

Nasal congestion relieved, frontal distending pain significantly reduced, nasal discharge decreased, but nasal and inner canthi itching did not improve. On the basis of the original formula, ephedra was increased to 15 g, and cassia twig 12 g and perilla leaf 15 g were added. 7 doses. It was instructed that ephedra, cassia twig, and perilla leaf should be decocted later for 20 minutes.

5.1.3. Third visit on September 7, 2023

The patient reported that after taking the medicine on the night of the second visit, he had slight sweating, and nasal itching and inner canthi itching disappeared immediately. After taking 7 doses, all symptoms were eliminated. He was instructed to take good care of the mouth and nose, especially protection of the mouth, nose, head, and neck during sea fishing. Follow-up visits later showed no recurrence.

5.1.4. Notes and details

The patient liked sea fishing, and wind-cold-damp pathogens invaded the body through the skin, mouth, and nose. Wind broke through the defense of defensive Yang, cold caused stagnation, resulting in severe facial tightness; damp was sticky, wind-cold-damp struggled with each other, defensive Yang resisted pathogens and warmed the mouth and nose, and wind-cold-damp pathogens were transformed into “nasal discharge” after being warmed by defensive Yang; wind pathogens were blocked in the narrow mouth and nose of the Yangming meridian and lingered, hence severe nasal and inner canthi itching. Due to long-term invasion of wind-cold-damp pathogens, the lung-defense was damaged, and the exterior defense decreased, so other pathogens such as allergens invaded unimpeded, causing discomfort of the mouth and nose. The patient’s pulse was very slippery and slightly tight, with slippery and greasy tongue coating, showing signs of both damp and cold. Due to long-term retention of wind-cold-damp in the body, invading Taiyin, leading to dysfunction of the spleen in transforming dampness and sticky stool. In summary, Maxing Shigan Decoction was used in the first visit. Ephedra, pungent and warm, disperses defensive Qi and expels pathogens outward. Zhang Zhiyuan believed that ephedra alone has weak diaphoretic effect and must be combined with apricot kernel to penetrate the skin and hair, so ephedra and apricot

kernel were used together to dispel and descend lung Qi^[3,4]. A small amount of raw gypsum resolved stagnant heat in the lung caused by prolonged illness. *Pogostemon cablin*, with aromatic and dispersive nature, was combined with ephedra to dispel lung-defense and penetrate exterior pathogens, and asarum, magnolia flower, and *Angelica dahurica* were added to penetrate the orifices of the head, assisting ephedra and *Pogostemon cablin* in dispersion; *Pinellia ternata* resolved dampness and phlegm. Therefore, most of the wind-cold-damp pathogens were eliminated after the first visit, and symptoms such as nasal congestion and clear nasal discharge were significantly relieved. However, although ephedra combined with apricot kernel, *Pogostemon cablin*, and various orifice-opening and exterior-relieving medicines in the first visit had a diaphoretic effect, the effect was weak, resulting in a large amount of wind pathogens still lingering in Yangming. Xie Suxin et al. concluded through literature sorting that when the dosage of ephedra is greater than that of cassia twig, it can exert a strong diaphoretic effect^[5]. Therefore, cassia twig and perilla leaf were added in the second visit to enhance the diaphoretic and exterior-relieving effect, wind was expelled with sweat, and nasal and inner canthi itching were eliminated.

5.2. Case of nasopharyngeal tube obstruction with sneezing and tinnitus

Liu Mouhua, female, 29 years old, usually had dry nose and frequent sneezing. She was diagnosed with allergic rhinitis by Western medicine. Three years ago, she had an exogenous fever, and after taking Western medicine and Chinese patent medicines (specifics unknown) by herself, the fever subsided, but the sense of nasopharyngeal tube obstruction remained unresolved.

5.2.1. First visit on February 11, 2023

(1) Main complaint

Sense of nasopharyngeal tube obstruction for more than 3 years. Current symptoms: Sense of nasopharyngeal tube obstruction, feeling of mucus sliding, nasal itching, dry nose, frequent sneezing, accompanied by tinnitus, dry mouth, normal appetite, loose stool, dark tongue with red tip, black and thick sublingual collaterals, greasy and slightly slippery coating, right pulse: guan slippery, cun slightly tight and rapid, extending to Yuji (thenar eminence); left pulse: stringy, thin, and stagnant. She usually had excessive leukorrhea. Blood routine examination was normal, and nasal endoscopy was normal.

(2) Syndrome differentiation

Wind-cold constraining the lung, phlegm-damp lingering. Treatment principle: Induce sweat to eliminate dampness, dispel lung Qi, and induce resuscitation. Modified Xiaoqinglong Decoction plus Gypsum Decoction was prescribed: Ephedra 15 g, cassia twig 15 g, dried ginger 10 g, asarum 8 g, dried tangerine peel 30 g, *Pinellia ternata* 15 g, licorice 10 g, raw gypsum 40 g, bitter apricot kernel 12 g, *Pogostemon cablin* 30 g, magnolia flower 20 g, *Angelica dahurica* 20 g, roasted *Atractylodes macrocephala* 30 g, *Eupolyphaga sinensis* 8 g, *Bombyx batryticatus* 6 g, *Schizonepeta tenuifolia* 10 g, Saposhnikovia root 10 g, *Platycodon grandiflorus* 10 g, *Aurantii fructus* 30 g. 5 doses.

5.2.2. Second visit on February 16, 2023

The patient reported sweating immediately after taking the medicine, nasal itching and sense of nasopharyngeal tube obstruction disappeared, and tinnitus was significantly relieved. After taking the subsequent 4 doses, dry mouth and dry nose disappeared, and stool was slightly formed. She was instructed to continue taking Linggui Zhugan Powder for 1 month. Follow-up visits later showed no recurrence.

5.2.3. Notes and details

The nasopharyngeal tube is in contact with air, similar to the nasal cavity, lung, trachea, and bronchi. According to Liu Shaowu's "Exterior Region" theory, the nasopharyngeal tube also belongs to the exterior region. The patient's sense of nasopharyngeal tube obstruction and feeling of mucus sliding have no fundamental difference in pathogenesis from nasal congestion and discharge, except that external pathogens such as wind-cold-damp are stubborn and lingering for a long time, competing with healthy Qi in the orifices such as the nasopharyngeal tube and ears of the head, with a deep location, hence the stubborn symptoms of the patient, manifested as both nasopharyngeal tube obstruction and tinnitus. Zhao Jinghua et al. used Mahuang Decoction to treat patients with tinnitus and achieved good curative effect [6]. The patient's right pulse extended to Yuji combined with stagnant left pulse and black and thick sublingual collaterals were signs of Qi and blood stagnation. Stagnation of Qi movement in the upper Jiao, no way for external pathogens to escape, and prolonged retention, the lung-defense could not expel pathogens outward. Therefore, modified Xiaoqinglong Decoction was used. Among them, ephedra and cassia twig relieved exterior syndrome with the "diaphoresis method" and expelled pathogens outward; bitter apricot kernel penetrated the skin and hair; asarum eliminated retained fluid in the lung-defense; *Atractylodes macrocephala* and dried ginger warmed the spleen to cultivate earth and generate metal, enhancing the ability to transform dampness; dried tangerine peel and *Pinellia ternata* resolved dampness and phlegm; raw gypsum transformed stagnant heat. Zhang Xichun said that raw gypsum is good at treating rhinorrhea caused by liver transferring heat to the brain due to prolonged exogenous wind invasion, which is also the intention here [7]. *Schizonepeta tenuifolia* and saposchnikovia root ascended clear Qi; *Aurantii fructus* descended turbid Qi; *Platycodon grandiflorus* guided the medicine upward to the lesion; *Eupolyphaga sinensis* and *Bombyx batryticatus* soothed the liver, promoted Qi circulation, resolved blood stasis, and relieved stagnation; *Pogostemon cablin*, magnolia flower, and *Angelica dahurica* circulated the orifices of the head and assisted ephedra, cassia twig, and apricot kernel in inducing sweat to force pathogens out with sweat.

5.3. Case of nasal congestion with headache

Liu Moujie, female, 50 years old, had a history of dizziness and headache caused by a car accident, diagnosed as cerebral concussion by Western medicine. She had nasal congestion, frontal distending pain accompanied by frequent blinking for more than 10 years, diagnosed as ocular nerve spasm by Western medicine. She was treated with methylcobalamin, vitamin B1, and Chinese patent medicines for promoting blood circulation and removing blood stasis, but the curative effect was not obvious.

5.3.1. First visit on February 15, 2024

(1) Main complaint

Frontal distension with blinking and stuttering for more than 10 years.

(2) Current symptoms

Nasal congestion, frontal distending and throbbing pain, stuttering, aggravated by cold, aversion to wind, dark and dull tongue, greasy and slippery coating, tight and stringy pulse. Normal appetite and spirit.

(3) Syndrome differentiation

Wind-cold invading the orifice of the head, cold-damp stagnating in the Yangming meridian.

(4) Treatment principle

Dispel cold, eliminate dampness, dispel wind, and induce resuscitation. Modified Mahuang Decoction was

prescribed: Ephedra 15 g, cassia twig 15 g, bitter apricot kernel 14 g, licorice 10 g, *Pogostemon cablin* 30 g, *Pueraria lobata* 15 g, *Angelica dahurica* 20 g, asarum 10 g, *Acorus tatarinowii* 12 g, xanthium fruit 20 g, magnolia flower 20 g, *Atractylodes lancea* 12 g. 5 doses. It was instructed that ephedra and cassia twig should be decocted later for 20 minutes.

5.3.2. Second visit on February 20, 2024

The patient reported that after taking the fifth dose of medicine, no sweating occurred, but a large amount of whiteish-black sticky discharge was discharged from the nasal cavity. She felt the nasal orifices were unobstructed, the frontal distending and throbbing pain disappeared immediately, and her speech was fluent, with significant improvement in stuttering. She was instructed to increase ephedra to 20 g, add dried ginger 10 g and *Poria cocos* 30 g to the original formula, and continue taking 5 doses.

5.3.3. Third visit on February 25, 2024

She reported sweating after taking the medicine, and all symptoms disappeared. She remained stable after taking good care of the mouth and nose. She was instructed to continue taking modified Tongqiao Huoxue Decoction for rehabilitation. Follow-up visits later showed no recurrence.

5.3.4. Notes and details

The patient had an internal injury, and blood stasis already blocked the orifices of the head. When Yin pathogens such as wind-cold-damp invaded the head, external pathogens combined with blood stasis in the Yangming meridian of the head, and phlegm-blood stasis intertwined in the facial collaterals, leading to facial spasm. The stringy pulse indicated pathogen stagnation, the tight pulse indicated constriction, and combined with the patient's frontal distending pain and nasal congestion, it was known that wind-cold-blood stasis intertwined in the Yangming meridian. Therefore, ephedra and cassia twig were used to induce sweat, expelling pathogens with sweat; *Pogostemon cablin* and *Acorus tatarinowii* induced resuscitation, providing an outlet for pathogens; *Atractylodes lancea* resolved dampness; *Pogostemon cablin*, *Angelica dahurica*, asarum, magnolia flower, and xanthium fruit circulated the orifices of the head; *Pueraria lobata* promoted blood circulation in the head and neck. All medicines combined to eliminate phlegm, blood stasis, wind, and cold. Without the exterior-dispersing effect of the “diaphoresis method”, wind-cold would not be eliminated; without the orifice-opening effect of *Pueraria lobata*, *Acorus tatarinowii*, and asarum, phlegm-blood stasis would be difficult to remove.

6. Conclusion

Through the analysis of three clinical cases of cold-damp type allergic rhinitis, this paper initially demonstrates the clinical feasibility of the treatment idea combining Liu Shaowu's “Exterior Region” theory with Zhang Zhongjing's “diaphoresis method”. Traditionally, the “diaphoresis method” is mostly used for exterior syndrome caused by exogenous pathogens, but the authors innovatively applied it to the treatment of sinusitis, expanding its clinical scope of application. Although the three cases have different symptoms, nasal and eye itching, nasopharyngeal tube obstruction with tinnitus, or nasal congestion with headache, their core pathogenesis is the invasion of wind-cold-damp pathogens into the exterior region, stagnation of defensive Yang, and obstruction of orifices and collaterals. Using ephedra-based formulas as the main treatment, combined with medicines for

inducing resuscitation, resolving dampness, and promoting blood circulation, pathogens are expelled through diaphoresis and orifices are unobstructed, achieving significant curative effect. Practice has proved that classifying allergic rhinitis into the category of “exterior region” diseases and using the “diaphoresis method” to open the interstices and expel pathogens outward not only conforms to classic theories but also provides new ideas and methods for the treatment of this disease. In the future, larger-sample clinical studies are still needed to further verify and improve this diagnosis and treatment system.

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Ma W, 2011, Liu Shaowu’s Lectures on Three Regions and Six Diseases. Beijing: Science Press: 5–6 + 8.
- [2] Tian D, 2005, Huangdi Neijing Suwen. Beijing: People’s Medical Publishing House: 13, 63.
- [3] Yang S, Bai Q, Wang S, 2022, Application of Zhang Zhongjing’s “Diaphoresis Method” in the Treatment of Skin Diseases. *Journal of Western Traditional Chinese Medicine*, 2022(3): 64–67.
- [4] Zhang Z, 2017, Notes on Medication by National Medical Master Zhang Zhiyuan. Beijing: China Medical Science and Technology Press: 71.
- [5] Xie S, Xu Y, Tang J, 2024, Clinical Application of Herba Ephedrae and Ramulus Cinnamomi in Treating Respiratory Diseases. *World Traditional Chinese Medicine*, 19(14): 2191–2195.
- [6] Zhao J, 1986, Experience in Treating Tinnitus. *Journal of Yunnan College of Traditional Chinese Medicine*, 1986(4): 37–40.
- [7] Liu X, 2006, Revised Integration of Chinese and Western Medicine in Medical Practice. Beijing: People’s Medical Publishing House: 19.

Publisher’s note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.