

Pathogenesis and Integrated Traditional Chinese and Western Medicine Treatment Strategies of Allergic Rhinitis Based on the “Spleen (Stomach)-Lung-Nose Axis” Theory

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Abstract

In recent years, the prevalence of allergic rhinitis (AR) in China has increased markedly, significantly impairing patients' quality of life and imposing a substantial socioeconomic burden. Against this background, some scholars have proposed the “Spleen(Stomach)-Lung-Nose Axis” theory based on the Huangdi Neijing, elucidating the close physiological and pathological interconnections among the spleen (stomach), lung, and nose. Guided by this theory, this study correlates the traditional Chinese medicine pathogenesis of AR with modern pathophysiological mechanisms and explores an integrated traditional Chinese and Western medicine therapeutic strategy. This strategy aims to synergize the advantages of both medical systems to provide a more comprehensive and effective treatment regimen for AR, with the goal of alleviating symptoms, improving quality of life, and ultimately reducing the socioeconomic burden.

Keywords: Spleen; Lung; Traditional Chinese Medicine; Rhinitis; Allergic Rhinitis

1. Introduction

Allergic rhinitis (AR) is one of the advantageous diseases for prevention and treatment intraditional Chinese medicine (TCM) (Wu et al., 2021). Epidemiological data show that the prevalence of AR in China has been continuously increasing in recent years. Its typical symptoms, such as nasal congestion, rhinorrhea, and sneezing, severely affect patients' quality of life and work efficiency, and increase the socio-economic burden. Some patients may develop

complications such as nasal polyps and otitis media, further exacerbating the condition. Therefore, AR has become a hot topic in current research by both Chinese and Western medicine.

Pulmonary and Spleen Deficiency Syndrome is one of the typical patterns of AR (Yang, S. et al., 2012; Zhang et al., 2020), highlighting the central role of lung and spleen (stomach) functions in the pathogenesis and treatment of AR. Although the pathogenic mechanism of lung-spleen deficiency has not been fully elucidated, existing studies have confirmed a close association between pulmonary-spleen deficiency and the pathological process of AR. Based on the theory of the Huangdi Neijing, scholars have proposed the concept of the “Spleen (Stomach)-Lung-Nose Axis” (Liu et al., 2023). This article aims to systematically analyze the intrinsic connections between the pathophysiological mechanisms of AR and the “Spleen (Stomach)-Lung-Nose Axis” theory, thereby exploring integrated traditional Chinese and Western medicine strategies for prevention and treatment.

2. Overview of the “Spleen (Stomach)-Lung-Nose Axis” Theory

The “Suwen Jingmai Bielun” states: “Drinking enters the stomach, disperses essence and qi, ascends to the spleen, where the spleen disperses essence, then ascends to the lungs, regulates the water pathways, and descends to the bladder, distributing water and essence throughout the five meridians.” This passage elucidates the coordinated pathways of water metabolism involving the stomach, spleen, and lungs. The essence of food and drink is transported by the spleen and stomach to the lungs, where lung qi disperses and elevates, nourishing the nasal orifices. Professor Cheng proposed the existence of a “spleen (stomach)-lung-nose axis” linking the spleen, stomach, lungs, and nose. Although this theory originates from water metabolism, it is grounded in the visceral theory of the Huangdi Neijing and also encompasses core physiological processes such as qi movement. The Huangdi Neijing posits that the dynamic interaction among the spleen, stomach, lungs, and nose relies on qi movement: the spleen governs the ascent of clear qi, the stomach governs the descent of turbid qi, and the lungs oversee dispersion and descent. These three qi movements interdependently regulate water metabolism and the dispersion of clear yang. The function of the nasal orifices depends not only on lung qi dispersion but also on the ascending and descending actions of the spleen and stomach. Thus, the “spleen (stomach)-lung-nose axis” is a physiological axis involving multiple components such as water metabolism and qi movement. If the axis is coordinated, the nasal orifices are nourished; if unbalanced, pathogenic factors proliferate, leading to nasal diseases. For instance, spleen deficiency impairs transportation, leading to insufficient lung qi and the failure of clear yang to ascend, resulting in the nasal orifices losing warmth. Similarly, if stomach qi fails to descend, turbid yin rises and obstructs the nasal collaterals, causing nasal congestion and rhinorrhea, which may lead to nasal obstruction.

The “Suwen Yujizhenzang Lun” states, “The spleen is an isolated organ, located in the central and nourishing the periphery... If it fails, it leads to obstruction of the nine orifices.” This “nine orifices” includes the nasal orifice, clearly indicating that spleen deficiency (insufficiency) can result in malnourishment of the nasal orifice, thereby providing theoretical support for the “spleen (stomach) -lung-nose axis” from a pathological perspective. Ying Lou, in his “Yixue Gangmu”,

notes, “The nose is the orifice of the lung, and the Yangming stomach meridian encircles the nose and mouth. Therefore, when wind-cold invades the stomach meridian, nasal obstruction occurs; when spleen heat transfers to the lung, epistaxis and rhinorrhea occur.” This theory elucidates the influence of the spleen, stomach, and lung on the nasal orifice from both the aspects of external pathogen invasion and internal injury transmission, further corroborating the core role of this axis in maintaining the body's defense and internal homeostasis. From a pathological standpoint, it provides additional evidence for the “spleen (stomach)-lung-nose axis” theory.

3. Reflections on the Pathogenesis of Allergic Rhinitis Based on the “Spleen (Stomach)-Lung-Nose Axis” Theory

3.1. “Inherent Deficiency” and Increased Genetic Susceptibility to AR in Individuals

Based on the "Spleen (Stomach)-Lung-Nose Axis" theory, the stability of the axis system relies on the solid material foundation and coordinated physiological activities of the spleen, stomach, and lung, with this foundation largely derived from innate endowment. The evident genetic predisposition observed in the pathogenesis of AR can be regarded as a weak link in the innate homeostasis of the axis system. Modern pathophysiological studies have demonstrated (Subspecialty Group of Rhinology et al., 2022) that the pathogenic premise of AR lies in a sensitized state induced by certain allergens. This sensitized state frequently occurs in specific populations. Epidemiological surveys indicate that over 10% of AR patients have a family history of allergic diseases. Foreign studies have found (Choi et al., 2021) that AR is significantly influenced by genetic factors, with concordance rates as high as 45%–60% among monozygotic twins, which corroborates from a modern medical perspective the potential impact of innate factors on the defensive stability of the axis system.

Genetic studies have provided evidence for this: genome-wide association studies and HLA fine-tuning studies (Waage, J. et al., 2018) identified 41 risk loci for AR; research based on the CD14 gene (Shan et al., 2023) proposed that the dominant gene model (CC vs CT+TT) at the CD14-159C/T locus may increase susceptibility to AR. Researchers from Fudan University in Shanghai (Zhang et al., 2021) identified six key genes influencing the pathogenesis of allergic rhinitis through bioinformatics analysis: CD44, HLA-DPA1, HLA-DRB1, HLA-DRB5, MUC5B, and CD274. These findings reveal the micro-level basis of “innate endowment” at the genetic level, and their abnormalities may predispose the “spleen (stomach)-lung-nose axis” to fragility in subsequent development and environmental challenges.

Traditional Chinese Medicine theory posits that innate endowment originates from the father's essence and the mother's blood, residing in the kidneys as the root of primordial qi, which constitutes the foundation of life activities. The “Suwen Tian Nian” states, “With the mother as the base and the father as the shield,” emphasizing that the yin-yang balance of parents determines the strength and constitutional differences of offspring. The primordial qi in the kidneys, as the foundation of innate endowment, requires nourishment from the postnatal transformation of food essence by the spleen and stomach to activate lung function and fortify the exterior defenses. Congenital deficiency leads to insufficient primordial qi and kidney essence

depletion, resulting in inadequate nutrient supply for spleen and stomach transformation, thereby causing spleen deficiency. The spleen is responsible for the dysfunction of transportation and transformation. Spleen deficiency leads to an imbalance in the metabolism of qi and body fluids, thereby generating dampness and transforming it into phlegm. The accumulation of phlegm-dampness obstructs lung qi, resulting in lung invasion and nasal obstruction. This is the so-called “the spleen is the source of phlegm generation, and the lung is the container of phlegm.” Additionally, the spleen is the mother of the lung, and when the mother is diseased, it affects the child. Spleen deficiency leads to lung deficiency, and insufficient lung qi fails to defend the exterior. Therefore, innate insufficiency can result in an unstable foundation of the “spleen (stomach)-lung-nose axis,” weakening the axis function and increasing susceptibility to allergic rhinitis.

Research based on Professor Wang Qi's classification of nine constitutional types revealed that the Special Endowment Constitution, Qi-deficiency constitution and Yang-deficiency constitution (Zhang et al., 2024; Tian et al., 2023) are the primary TCM constitutional types in patients with allergic diseases. Existing studies (Wang et al., 2019) indicate that AR patients with Special Endowment Constitution may have a related family history. This suggests that the three constitutions caused by “inherent endowment deficiency” impairs the acquired spleen and stomach, thereby weakening the lung-defense system's ability to protect against external pathogens. Ultimately, this leads to dysfunction of the “spleen (stomach)-lung-nose axis,” manifesting as heightened hypersensitivity of the nasal passages to external allergens (Figure 1). Therefore, endowment deficiency serves as the intrinsic initiating factor contributing to the imbalance of the “spleen (stomach)-lung-nose axis” and the increased susceptibility to AR in individuals.

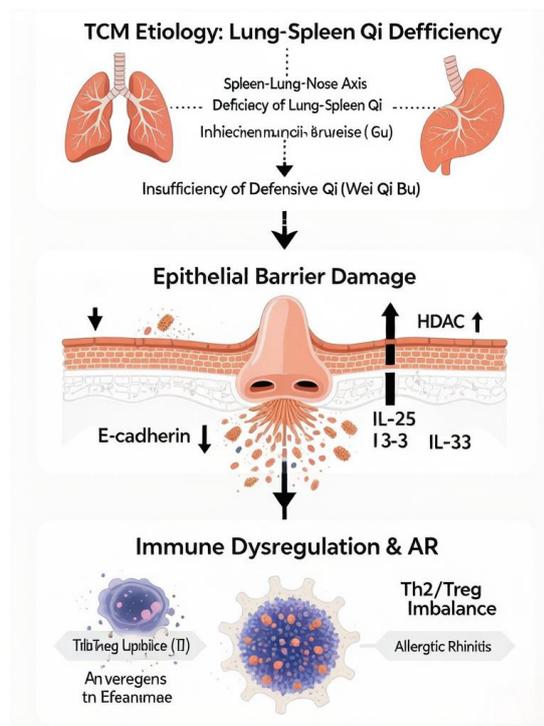
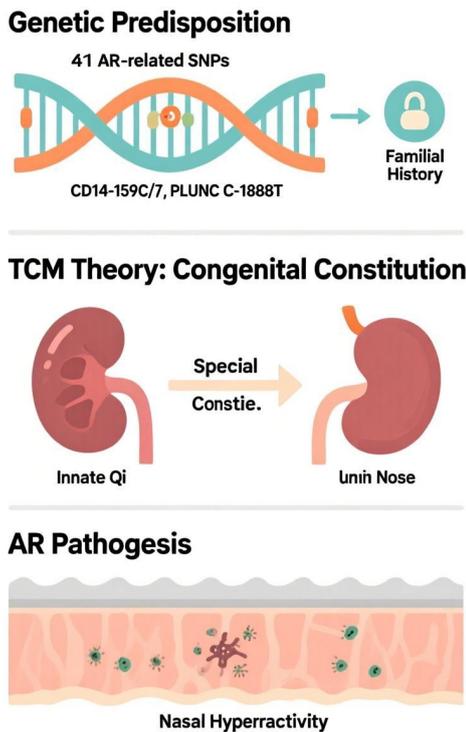


Figure 1.XXX

Figure 2.XX

3.2. “Wei qi Insufficiency” and Damage to the Nasal Mucosal Epithelial Immune Barrier

The nasal mucosa serves as the primary barrier against AR, and impairment of its epithelial barrier function is one of the key pathological mechanisms of AR. Current research has revealed that downregulation of E-cadherin expression and activation of histone deacetylases (HDACs) are closely associated with damage to the nasal epithelial barrier (Lee et al., 2021; Duan et al., 2021) (Figure 2).

E-cadherin is a calcium-dependent intercellular adhesion transmembrane glycoprotein that plays a critical role in maintaining stable connections between epithelial tissue cells. In patients with allergic rhinitis, the expression and immunoreactivity of E-cadherin in nasal epithelium are reduced (Lee et al., 2016). Downregulation or loss of E-cadherin disrupts intercellular junctions, weakens the epithelial immune barrier, and diminishes its ability to block allergen penetration into the submucosa. This results in enhanced proteolytic degradation of airborne allergens and epithelial cell dysfunction. Additionally, the balance between cysteine proteases and antiproteases in the nasal mucosa is disrupted, leading to reduced secretion of E-cadherin within epithelial cells. Consequently, this triggers an amplified immune response, activates monocytes, and initiates a cascade of allergic reactions.

The activation of histone deacetylases (HDACs) is considered a key factor in triggering AR due to damage to the nasal mucosal epithelial barrier. When the nasal mucosal epithelial barrier is compromised, HDACs activate mucosal repair mechanisms and trigger protective inflammatory responses. Epithelial damage in the local skin and mucosal barrier can lead to the release of inflammatory factors such as interleukin-25 (IL-25) and interleukin-33 (IL-33), which induce allergic reactions in the nasal epithelium, promote the onset and progression of AR, and further compromise the integrity of the epithelial immune barrier (Lee et al., 2016; Bergougnan et al., 2020).

In TCM theory, the Lung governs qi and manages respiration, while Wei-defensive qi has the function of resisting external pathogens. The Spleen is the source of qi and blood production, serving as the foundation for the generation of Wei-defensive qi. Statistics show that among patients with allergic rhinitis, those with yang deficiency and qi deficiency constitutions account for the highest proportion, both characterized by “insufficient Wei-defensive qi” as the core feature, suggesting that Lung-Spleen qi deficiency is an important pathogenesis of this disease (Wang et al., 2022). Among these, Spleen deficiency leading to Lung deficiency is the key link. The Spleen belongs to Earth and the Lung to Metal, with a mother-child organ relationship; Spleen Earth deficiency fails to nourish Lung Metal, known as “mother-organ disorder affecting the child.” Simultaneously, the Spleen governs the transportation and transformation of water and grain essences. If Spleen deficiency impairs transportation and transformation, the source of qi and blood generation diminishes, reducing the essential substances transported upward to the Lungs. Consequently, Lung qi also becomes deficient, impairing its functions of diffusion and descending. Lung qi deficiency further affects the generation and distribution of Wei-defensive qi—although Wei-defensive qi originates from the Spleen, it relies on Lung qi diffusion to be distributed to the nasal orifices and body surface. Lung deficiency impairs diffusion, making it difficult for Wei-defensive qi to reach the nasal passages, thereby compromising the local

defensive barrier's integrity. The “insufficient Wei-defensive qi” resulting from Lung-Spleen qi deficiency not only manifests as decreased immune defense function (Th2/Treg imbalance) but is also directly associated with nasal epithelial barrier damage (downregulation of E-cadherin and activation of HDAC), ultimately leading to an imbalance in the “Spleen-Lung-Nose” axis stability, which constitutes the core internal cause of the pathogenesis of allergic rhinitis.

3.3. “Insufficient Generation of Qi and Blood, Abnormal Transport and Distribution” and the Effect of Endoplasmic Reticulum Stress-Autophagy Pathway in Nasal Mucosa

In cellular metabolism, the endoplasmic reticulum stress-autophagy pathway is closely associated with micro-level functions such as cellular nutrient regulation and tissue repair. Studies have shown (Zhu et al., 2024) that the PERK/eIF2 α /CHOP signaling pathway not only induces cellular autophagy but may also be involved in the pathogenesis of AR. The endoplasmic reticulum stress-autophagy system plays a significant role in the pathogenesis of asthma by participating in antigen presentation, regulating immune-inflammatory response cells, and modulating the functions of airway constitutive cells. Asthma and AR are often referred to as “the same airway, the same disease,” suggesting that their mechanisms may be analogous in AR. Nedjic and his team (Nedjic et al., 2008), in their study of thymic epithelial cell autophagy, proposed that autophagy may contribute to immune diseases by regulating endogenous antigen presentation. Existing research (Yu et al., 2019) has confirmed that LC3 regulates the high expression of eosinophil cationic protein (ECP) in AR patients through specific signaling pathways. Therefore, cellular autophagy may play a critical role in the toxic effects and inflammatory severity of AR by modulating eosinophil activity.

The “Spleen (Stomach)-Lung-Nose” axis theory posits that robust function of the Lung and Spleen forms the foundation for the generation and distribution of qi and blood. The nasal orifice, as the terminal organ of this axis system, relies on the effective transmission and coordinated operation of this axis for its normal physiological functions. Spleen deficiency initially leads to a depletion in the source of qi and blood generation, which subsequently affects the upward distribution of qi and blood along the axis, ultimately resulting in a lack of nourishment to the nasal mucosa. As stated in Suwen (Plain Questions), Chapter Sixty-Two: “When qi and blood are disharmonious, yin and yang become counteractive; defensive qi is in turmoil within the defensive tier, while nutrient blood rebels within the meridians; qi and blood separate from their proper places, creating one vacuity and one repletion.” This reveals the importance of the exuberance and decline of qi and blood in the context of disease. An imbalance in the state of qi and blood movement within the axis directly leads to pathological changes in the terminal organ. The Spleen acts as the foundation of the axis, governing the ascent of the clear to transport essences; the Lung acts as the pivot of the axis, governing diffusion and descending to distribute qi and blood to the nasal orifice. If both the Lung and Spleen are deficient, it will trigger dysfunction of the axis: Spleen deficiency results in the failure of clear yang to ascend, weakening the starting point of the axis; Lung deficiency leads to a loss of diffusion function, obstructing transmission along the axis. The mutual reinforcement of insufficient qi and blood generation and disordered distribution deprives the nasal mucosa of nourishment, thereby triggering allergic rhinitis. Thus, it can be seen that the deficiency in qi and blood generation and the disturbance in

their distribution, caused by the dysfunction of the “Spleen (Stomach)-Lung-Nose” axis, may influence the progression of the disease by activating the endoplasmic reticulum stress-autophagy pathway in the nasal mucosa (Figure 3).

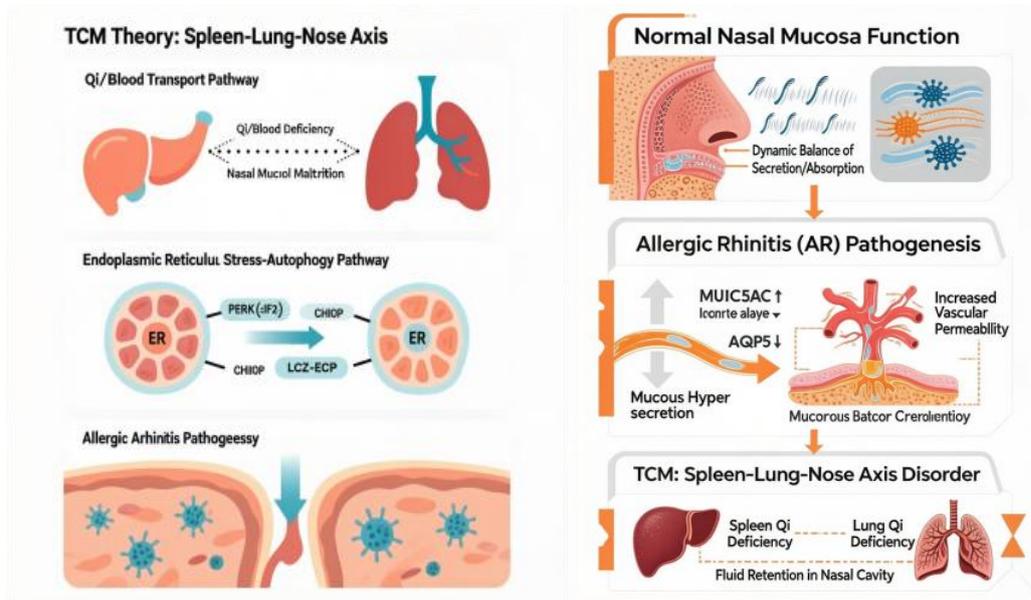


Figure 3

Figure 4

3.4. “Abnormal Transformation and Transportation of Water-Liquid, Stagnation and Accumulation of Water-Dampness” and Hypersecretion of Nasal Mucus and Increased Vascular Permeability

The nasal mucosal tissue produces abundant secretions that serve to defend against bacterial invasion and maintain the moisture balance of the respiratory tract. Additionally, the production and absorption of these fluids are regulated by a dynamic equilibrium. Modern medical research has confirmed that increased permeability of nasal microvessels and excessive mucus secretion are critical components in the pathogenesis of AR (Figure 4). The nasal mucosal epithelium contains ciliated epithelial cells, whose periodic coordinated ciliary movements provide the driving force for mucus transport. Excessive mucus can impair the ciliary transport function of the nasal mucosa, reduce respiratory mucosal function and allergen clearance, and exacerbate the chronic inflammatory process of AR. Mucin (MUC), the primary component of nasal mucus, is a highly glycosylated linear oligopeptide sequence. Studies have found that the imbalance of MUC5AC/AQP5 (Liu et al., 2020) leads to mucosal fluid metabolism disorders and hypersecretion of mucus. Simultaneously, increased permeability of microvessels in the nasal mucosa results in plasma component extravasation into surrounding tissues, causing local tissue edema, which further exacerbates mucus secretion. Inhibition of MUC5AC expression in patients with AR can significantly reduce mucus secretion and improve symptoms of allergic rhinitis (Zhao et al., 2024).

Nasal mucus is a type of body fluid, and its hypersecretion is a manifestation of abnormal fluid distribution. The “Spleen (Stomach)-Lung-Nose” axis theory is based on the metabolic pathway of body fluids, stating that “fluids enter the stomach, overflow the essence and qi, and ascend to

the spleen.” The initial site of fluid metabolism is the spleen and stomach. When spleen qi is weak, its transportation and transformation functions are impaired, preventing the conversion of ingested nutrients into qi, blood, and body fluids, as well as the elimination of water retention from the body. Fluid retention in the nasal cavity leads to mucosal edema and increased vascular permeability, resulting in excessive mucus secretion. The lung, as the upper source of water, plays a crucial role in the dispersion and descent functions of fluid metabolism. When lung qi is weak, its dispersion function is diminished, failing to distribute fluids upward and outward, leading to localized fluid accumulation. Simultaneously, its descent function is also compromised, preventing the downward transport of fluids to excretory organs such as the bladder, thereby exacerbating fluid metabolism disorders. Therefore, an imbalance in the “Spleen (Stomach)-Lung-Nose” axis, whether in the spleen-stomach or lung, can result in localized fluid retention, manifested as excessive nasal mucus secretion and increased vascular permeability.

4. Reflections on the Integrated Traditional Chinese and Western Medicine Treatment Approach for Allergic Rhinitis Under the “Spleen (Stomach)-Lung-Nose Axis” Theory

Based on the “Spleen (Stomach)-Lung-Nose Axis” theory, the pathogenesis of AR can be explored, revealing certain commonalities between traditional Chinese and Western medicine in explaining the pathophysiological process of AR caused by lung-spleen qi deficiency. Therefore, this study proposes integrating the theories of both traditional Chinese and Western medicine, combining the strengths of both approaches, which holds practical significance for optimizing the current treatment regimen for AR of the lung-spleen qi deficiency type.

In Western medical treatment, the primary strategy is symptomatic management, with a focus on the “nasal” component of the “spleen (stomach)-lung-nose axis” to alleviate patient discomfort. Therapeutic approaches (Subspecialty Group of Rhinology et al., 2022; Papadopoulos et al., 2016) include the use of nasal corticosteroids (e.g., mometasone furoate), antihistamines (e.g., loratadine), and leukotriene receptor antagonists (e.g., montelukast). Additionally, allergen immunotherapy (AIT) is available, but its efficacy is limited in patients with multiple sensitizations and may induce adverse reactions such as localized swelling. From the perspective of the “spleen (stomach)-lung-nose axis” theory, current treatments predominantly focus on local inflammation control (“manifestation”), failing to comprehensively and systematically address the dysfunction of lung and spleen functions (“root cause”), leading to prolonged and recurrent disease courses.

The “Spleen-Stomach-Lung-Nose” axis is a functional system driven by viscera, with qi, blood, and essential substances as mediators. The Spleen (Stomach), located in the middle burner, serves as the source of qi and blood production and governs ascending the clear to transport essences to the Lung. The Lung, situated in the upper burner, governs diffusion and descending to distribute essences to the nasal orifice. The nose, as the orifice of the Lung, relies on nourishment from qi and blood to maintain ventilation and defensive function. These three components form a longitudinal linkage of “generation-transportation-nourishment”: a robust Spleen and Stomach ensure a sufficient source of qi and blood; unobstructed Lung qi diffusion guarantees orderly

distribution; and well-nourished nasal passages maintain a solid barrier. Conversely, Spleen deficiency impairs transportation, depleting the source of qi and blood and weakening the axis's starting point; this leads to Lung deficiency with impaired diffusion, blocking transmission; ultimately, the nasal passages lose nourishment, rendering the mucosa vulnerable to invasion by external pathogens and resulting in disease. The core pathogenesis of Allergic Rhinitis (AR) is understood as an imbalance in the transmission of qi and blood along this axis due to Spleen and Lung deficiency. This imbalance arises from a combination of congenital factors, such as an inherent weakness in the Spleen, Lung, and nasal orifice, and acquired factors, including external pathogens (wind-cold) and improper diet. The clinical goal of Traditional Chinese Medicine (TCM) is to restore homeostasis by regulating the internal environment and immune function, ultimately correcting the imbalance of the “Spleen (Stomach)-Lung-Nose” axis to alleviate or eliminate AR symptoms. With the resurgence of TCM, its application as an alternative or complementary therapy for AR is becoming increasingly widespread, often becoming the first choice for many patients. A significant body of animal experiments and clinical trials (Xu et al., 2024; Fan et al., 2024; Yin et al., 2023) has confirmed that TCM formulas targeting Lung-Spleen Qi deficiency pattern AR, can regulate inflammatory factors like IgE, IL-4, and IL-33. By controlling immune imbalance, they improve clinical symptoms, enhance quality of life, regulate immune status during non-acute phases, and even mitigate inflammatory responses upon allergen exposure, achieving the goal of “preventing disease before it arises.” TCM emphasizes “treating the manifestation in acute conditions and the root cause in chronic conditions.” Therefore, clinical treatment should be tailored to the patient's specific needs, leveraging the complementary advantages of both Chinese and Western medicine. Given their synergistic mechanisms, a phased, integrated strategy is recommended:

Acute Phase: The primary goal is the safe and rapid relief of symptoms like nasal congestion and rhinorrhea. While decongestants were once used, their significant side effects have limited their clinical application. As an optimized alternative, Western Medicine (nasal glucocorticoids) can be combined with Local Acupuncture Therapy targeting the “Nose.” Intranasal acupuncture at points like Neiyangxiang (ST26) and Biqu (M-HN-14) can significantly reduce turbinate swelling, decrease mucus secretion, and improve nasal ventilation. This can be further supported by Chinese Herbal Medicine with exterior-releasing formulas to expel pathogens.

Remission Phase: The focus shifts to preventing recurrence by adjusting the patient's constitution. This phase fully utilizes TCM's strengths by targeting the “Spleen and Lung.” Chinese Herbal Medicine (Spleen-Lung axis), such as Yu Ping Feng San or modified Bu Zhong Yi Qi Tang, is the primary treatment, selected based on pattern and constitution. This can be complemented by appropriate technologies like herbal sachets. For patients with a clearly identified single allergen, a gradual integration of Allergen-Specific Immunotherapy (AIT) can be initiated to induce immune tolerance.

Recalcitrant Cases: For patients with poor response to conventional Western medicine, TCM becomes the mainstay even during acute phases, focusing on exterior-releasing methods with supplementary support for the Lung and Spleen. For recurrent and stubborn cases, the strategy builds upon the first two pillars by incorporating Constitutional Regulation and Microecological

Adjustment. This deeper level of intervention aims to address the patient's fundamental predisposition and restore internal balance, preventing recurrence at its roots.

This phased approach embodies a “three-dimensional integration pathway” which strategically combines treatment according to the disease phase, targets the “Spleen-Lung-Nose” axis, and progressively deepens the intervention from symptomatic relief to constitutional and microecological regulation, fully reflecting the design philosophy of “axis linkage, phased focus, and holistic synergy.”

5. Summary

In conclusion, the analysis of the pathogenesis of AR based on the “spleen (stomach)-lung-nose axis” theory reveals that “inherent deficiency” “impaired Wei-defensive qi” “insufficient production and transportation of qi and blood” and “abnormal transformation and transportation of body fluids leading to water retention” are linked to modern medical factors including genetic susceptibility, damage to the nasal mucosal epithelial immune barrier, endoplasmic reticulum stress-autophagy pathway effects, hypersecretion of nasal mucus, and increased vascular permeability. These associations may constitute causal relationships. Based on these, we propose an integrated TCM-Western medicine therapeutic strategy. This approach aims to combine the strengths of both medical systems to provide a more comprehensive and effective treatment plan for allergic rhinitis, with the goal of alleviating patient symptoms, improving their quality of life, and ultimately reducing social and economic burdens.

With the continuous advancement of medical technology, the prospects for integrated traditional Chinese and Western medicine in treating AR of the lung-spleen qi deficiency type appear particularly promising. Future research should delve deeper into the mechanisms of integrated traditional Chinese and Western medicine in treating AR of the lung-spleen qi deficiency type, with the expectation that more high-quality evidence-based medical data will be available to promote the application and popularization of this integrated approach in AR management.

Author Contributions:

All authors have read and agreed to the published version of the manuscript.

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The authors declare no conflict of interest.

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