

Diffusing Lung Therapy for Functional Constipation Based on Lung-Intestine Exterior-Interior Theory

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Abstract: *Based on the classic traditional Chinese medicine theory that the lung and large intestine are interior-exteriorly related, this article systematically summarizes the research progress and clinical application experience of lung-dispersing therapy for functional constipation. It interprets the theoretical connotation of this doctrine and incorporates modern advances such as embryonic developmental homology, cellular signal transduction, shared mucosal immunity, gut microbiota interaction, and the gut-lung axis, so as to demonstrate the scientific basis and intrinsic rationality of lung-dispersing therapy from multiple perspectives. Guided by the strategy of simultaneous lung-intestine treatment, the clinical efficacy of this approach is further confirmed. This study is expected to overcome the limitations of conventional Western medical treatment for functional constipation and provide new theoretical and therapeutic references for its intervention with traditional Chinese medicine.*

Keywords: Functional Constipation, The Lung and Large Intestine Being Exterior-Interiorly Related, Diffusing Lung Therapy, Concurrent Treatment of the Lung and Intestine, TCM Review.

1. Introduction

Functional constipation (FC) is clinically defined as a functional bowel disorder that excludes organic pathologies, characterized primarily by abnormalities in the defecation process. Patients mainly present with hard stools, straining during defecation, reduced stool frequency, and a sensation of incomplete evacuation after defecation. According to the Rome IV diagnostic criteria, the diagnosis requires the presence of the aforementioned specific symptom combination lasting for at least three months. Functional constipation is distinguished from irritable bowel syndrome with constipation (IBS-C). Based on this, the essence of functional constipation is chronic defecation dysfunction occurring in the absence of clear structural or biochemical abnormalities and without meeting the diagnostic criteria for IBS-C [1-2]. In recent years, epidemiological data have shown that the incidence of functional constipation is continuously rising, with a global prevalence of 10.1% [3], and its incidence is closely related to age, sex, and geographic region [4-5]. Existing studies have confirmed that the pathogenesis of FC is not solely due to local intestinal lesions but results from the coordination of multiple systems and pathways. Among these, the brain-gut axis [6] and the lung-gut axis are most prominent. The lung-gut axis deeply aligns with the classical Chinese medicine theory “the lung and large intestine are interior-exteriorly related,” providing a theoretical basis for integrating Chinese and Western medicine to break through the limitation of treating constipation solely from the intestine and adopting the method of ventilating the lung to treat both the lung and intestine in FC intervention. Currently, treatment for functional constipation remains predominantly focused on local interventions targeting the intestine, with insufficient attention paid to the role of the “lung” in pathogenesis and treatment. Existing studies often explore only one dimension of “the lung and large intestine are interior-exteriorly related”

in isolation, lacking systematic integration of Chinese and Western medicine analysis. Therefore, from the perspective of “lung-intestine co-treatment,” this article systematically reviews the theoretical foundation, modern mechanisms, and clinical application of the Diffusing Lung Therapy in treating functional constipation, aiming to provide new ideas and evidence-based support for the management of this condition.

2. “Lung and Large Intestine Being Interior-Exteriorly Related”: Theoretical Connotation and Modern Interpretation

2.1 Traditional Chinese Medicine (TCM) Theoretical Understanding of “Lung and Large Intestine Being Interior-Exteriorly Related”

The theory of “the lung and large intestine being interior-exteriorly related” originated from the Yellow Emperor’s Inner Canon [7]. The explicit textual formulation first appeared in Tang Dynasty physician Sun Simiao’s commentary on the Huatuo Shenfang [8].

The Spiritual Pivot·Transport Points states clearly: “The lung pairs with the large intestine, and the large intestine is the fu-organ of transmission.” The Spiritual Pivot·Channels [7] also records: “The foot taiyin lung meridian of the hand begins at the middle jiao, then descends to connect with the large intestine...” These discussions reveal that the lung and large intestine are interconnected and interior-exteriorly related through the meridian-collateral system; as pathways, the meridians link the qi movement and body fluids between the lung and large intestine.

“The lung is the official of the prime minister, from whom regulation and governance emanate,” which explains that the coordinated diffusion and descent functions of lung qi ensure

the large intestine's transmission remains regular and rhythmic. The Zhengyin Maizhi·Dabian Mijie Lun [9] records: "When lung qi cannot descend to the lower part, the large intestine fails to receive the command for transmission, and thus stool becomes bound." This describes the core pathogenesis of constipation arising from disordered lung qi descent, weak downward qi movement, and failure of large intestine transmission, providing direct classical textual basis for the method of ventilating the lung and unblocking the fu-viscus. Wu Jutong's Systematic Differentiation of Warm Diseases·Middle Jiao Chapter [10] states: "When phlegm and saliva are congested and stagnant, the right cun pulse is full and large, and lung qi fails to descend—Xuanbai Chengqi Decoction governs it." This theory clarifies that the lung and large intestine are connected through qi movement, and qi movement in turn provides the driving force for the distribution of body fluids.

When lung qi descends in an orderly manner, it can regulate the water pathways and distribute body fluids to the large intestine, allowing the intestinal fu-viscus to be moistened and avoiding dry binding and obstruction. Lung qi deficiency with weak propulsion can lead to failure of large intestine transmission, manifesting as difficult and laborious defecation; phlegm-heat congesting lung qi causes loss of lung diffusion and descent and disordered fluid distribution, making it difficult to moisten the large intestine, resulting in intestinal dryness, fluid deficiency, and dry, bound waste that fails to move, thereby developing into constipation. As mentioned in Secret Records of the Stone Chamber·Volume 3 [11]: "When stool is bound and blocked, people attribute it to severe dryness of the large intestine, but who knows it is actually dryness of the lung? When the lung is dry, the clear-descending qi cannot act upon the large intestine, and the water of the kidney channel is only sufficient for self-maintenance—how can it flow sideways to moisten the ravines?" Clinically, those with bound and obstructed stool are mostly blamed on fluid deficiency and dry binding of the large intestine, while the root cause—lung dryness—is overlooked. When the lung is dry, the clear-descending qi fails to act, and fluids cannot be sent down via descent to nourish the large intestine; moreover, kidney water can only self-protect and has difficulty ascending to benefit or laterally moistening the intestines, eventually leading to loss of intestinal moisture and dry stool. This provides an approach for clinically treating intestinal-dryness-type constipation: if one merely moistens the intestine without nourishing the lung, it treats the branch but not the root, and integration with the lung is needed—treating both lung and intestine together to restore fluid distribution. If lung heat transfers to the large intestine, it can cause diarrhea; as stated in Essential Meanings of Medical Canons Integrated East-West·Volume 1 [12]: "Large intestine dysentery occurs in the season of autumnal metal, and it is also lung metal's residual heat transmitted to the large intestine." Both lung cold and lung deficiency can manifest as constipation: insufficiency of lung yang leads to weak qi movement propulsion, while deficiency of lung yin leads to inadequate fluid generation; both result in the large intestine losing moisture and propulsion, forming a mixed deficiency-excess constipation.

2.2 Modern Medical Basis of "Lung and Large Intestine Being Interior-Exteriorly Related" — A

Multidimensional Interpretation Based on the Lung-Gut Axis

The lung-gut axis, as the core theory in modern medicine explaining bidirectional regulation between the lung and intestine, operates through three major regulatory pathways: neural, immune, and microbial. It precisely echoes the TCM theory of "lung and large intestine being interior-exteriorly related" in terms of meridian interconnection, qi-movement synergy, and mutual nourishment of body fluids, verifying from a modern scientific perspective the TCM connotation of lung-intestine unity. It also provides clear therapeutic targets for the method of ventilating the lung to treat the intestine in functional constipation.

2.2.1 Embryonic Development and Neural Pathways: Material Basis for Lung-Intestine Meridian Connection

In TCM, the connection between the lung and large intestine is established through the meridians, providing pathways for the circulation of qi, blood, and body fluids. This theory is corroborated by dual evidence from embryonic development and neural regulation of the lung-gut axis. During the 3rd to 4th week of human embryonic development, both the lung and large intestine originate from the foregut of the primitive gut, demonstrating embryonic homology [13]. This endows the lung and intestine with a shared innate foundation at the levels of histocytology and molecular regulation [14], serving as the morphological prerequisite for their mutual functional influence. Furthermore, in the lung-brain-gut axis studied in cutting-edge literature: the brain-lung-gut axis takes the vagus nerve as its core conduction pathway, combined with the autonomic nervous system and enteric nervous system, forming a bidirectional regulatory neural network among the brain, lung, and intestine. The brain-lung axis achieves central regulation of respiration and pulmonary circulation via the autonomic nervous system, while lung receptors feed back information to the center through the vagus nerve; the brain-gut axis connects the center with the enteric nervous system via the vagus nerve, regulating intestinal motility and barrier function; the lung-gut axis influences each other through neuro-immune cross-regulation, and the three form a feedback loop involved in disease pathology [15]. The mutual regulation of neural pathways is significant in the occurrence and development of constipation, providing scientific basis for the method of ventilating the lung to improve intestinal neural conduction by regulating lung qi.

2.2.2 Signaling Pathways and Neuroendocrine Regulation: Molecular Mechanisms of Lung-Intestine Qi-Movement Synergy

The TCM concept that "lung qi descending can propel the downward movement of large intestine qi" centers on the dynamic synergy between the lung and intestine. The shared cellular signaling pathways and neuroendocrine networks within the lung-gut axis confirm the molecular basis of this synergy. Kou Yule et al. [16] used Ephedra and Rhubarb as sovereign drugs in a lung-intestine co-treatment approach for acute lung injury, confirming that this method can inhibit alveolar macrophage activation, reduce the activation and release of inflammatory cytokines TNF- α , IL-1 β , and IL-18, and alleviate inflammatory damage. The underlying

mechanism may involve restoring immune homeostasis by modulating the activation status of key inflammatory signaling pathways such as NF-κB/NLRP3. Moreover, neurotransmitters associated with the lung and large intestine include NO, SP, and VIP [17]. These substances are important mediators of lung-gut axis regulation and represent the material embodiment of TCM “qi movement.” When lung qi is deficient, the lung secretes increased NO, which, through transmission along the lung-gut axis, disrupts the balance of intestinal motility-related transmitters, leading to weakened large intestine transmission. The method of ventilating the lung can restore the balance of neuroendocrine substances between the lung and intestine by supplementing lung qi and regulating qi movement, thereby improving constipation at the level of motility.

2.2.3 Mucosal Immunity and Gut Microecology: Modern Connotation of Lung-Intestine Mutual Nourishment of Body Fluids

In TCM, “the lung is the upper source of water, distributing body fluids to moisten the large intestine.” The shared mucosal immune system of the lung-gut axis and the balance of gut microecology reveal the modern pathophysiological mechanism of “mutual nourishment of body fluids.” Both the lung and large intestine are important components of the human mucosal immune system. Lymphocytes activated in the intestinal mucosa can reach the lungs through the bloodstream, and changes in the lung’s immune status can also affect the intestine via the common mucosal immune pathway [18]. The lung serves as the canopy of the body and the upper source of water, inherently liking moisture and disliking dryness; it is also key to water-fluid metabolism. When lung fluids are abundant and diffusion-descent is appropriate, the intestine is moist and the fu-viscus unobstructed [19]. When lung qi is stagnant or there is lung

heat, immune disorders in the lung can damage the intestinal mucosal barrier, causing abnormal absorption and secretion of water by intestinal epithelial cells, insufficient production of intestinal fluid, and resulting in constipation characterized by TCM “intestinal dryness and fluid deficiency.” The method of ventilating the lung, through resolving phlegm, promoting descent, moistening the lung, and generating fluids, can regulate the immune state of the lung, improve intestinal mucosal barrier function via the lung-gut axis, and restore intestinal fluid metabolism. Meanwhile, gut microecology is the core link in bidirectional regulation of the lung-gut axis [20]. When lung qi is deficient, abnormal lung function leads to a decrease in beneficial bacteria (*Lactobacillus*, *Bifidobacterium*) and an increase in harmful bacteria (*Enterobacteriaceae*, *Staphylococcus*) in the intestine. This imbalance further suppresses intestinal peristalsis, reduces intestinal fluid secretion, and aggravates constipation. By restoring normal lung function, the method of ventilating the lung can modulate the structure of the gut microbiota through the microbial pathway of the lung-gut axis, increase the abundance of beneficial bacteria, improve the intestinal microenvironment, and achieve the therapeutic effect of “moistening the lung to moisten the intestine, regulating the lung to regulate the intestine.”

2.2.4 Summary

The neural, immune, and microbial regulation of the lung-gut axis can substantiate the theory of “lung and large intestine being interior-exteriorly related” from three aspects: pathways, motility, and body fluids. This provides modern evidence for the TCM approach of treating the lung and intestine together, and also endows the method of ventilating the lung for treating constipation with clear regulatory targets and a foundation for clinical practice (Table 1).

Table 1: Modern Correlation Between TCM “Lung and Large Intestine Being Interior-Exteriorly Related” and the Lung-Gut Axis, and Intervention Targets of the Diffusing Lung Therapy

Core Dimension of TCM Lung-Intestine Interior-Exterior Relationship	Corresponding Modern Medical Mechanism of the Lung-Gut Axis	Association with FC (Pathogenesis Level)	Intervention Target of Diffusing Lung Therapy (Treatment Level)
Meridian connection (material pathway)	Embryonic homology + neural pathway (neural regulation of the gut-lung axis)	Shared neural conduction pathway between lung and intestine; lung qi abnormality affects large intestine peristalsis/defecation reflex through nerve impulse conduction	Diffusing Lung Therapy improves large intestine neural conduction by regulating lung neural signals
Qi-movement synergy (motility regulation)	Signaling pathways (NF-κB/NLRP3, etc.) + neuroendocrine (intestinal peptides, neurotransmitters)	Shared cell signals and endocrine substances between lung and intestine; lung qi disharmony leads to disturbance of intestinal motility-related signals/transmitters, weakening large intestine transmission	Diffusing Lung Therapy regulates shared signaling pathways of lung and intestine, restoring intestinal smooth muscle contraction and neurotransmitter (NO/SP) balance
Mutual nourishment of body fluids (material basis)	Mucosal immunity + gut microecology (immune and microbial regulation of the gut-lung axis)	Shared mucosal immune system between lung and intestine; lung qi abnormality damages intestinal immune barrier and disrupts microbiota, leading to insufficient intestinal fluid secretion/intestinal dryness and fluid deficiency	Diffusing Lung Therapy improves intestinal mucosal immunity and microbiota structure by regulating lung immunity, restoring intestinal fluid metabolism

3. Discussion on the Pathogenesis of Functional Constipation Based on “Lung and Large Intestine Being Interior-Exteriorly Related”

Functional constipation (FC), as a common clinical condition, has been systematically elaborated in ancient Chinese medical literature. Ancient physicians classified it under disease names such as “difficult defecation” and “spleen constraint”,

and developed unique syndrome differentiation and treatment approaches based on the theory of zang-fu organs and meridians, forming a complete system of diagnosis and therapy. The term “constipation” first appeared in Qing Dynasty physician Shen Jin’ao’s *Zabing Yuanliu Xizhu* [21]. Later, during the Republican period, journals published “Therapy for Infantile Constipation,” first using constipation as a disease name, which has been adopted ever since [22].

According to the Jingyue Quanshu [23], the core pathogenesis of constipation is impaired transmission of the large intestine. The disease is located in the large intestine but is closely related to functional imbalances of the lung, spleen, liver, and kidney. Based on the theory of “lung and large intestine being interior-exteriorly related,” the occurrence of constipation is often associated with abnormal diffusion and descent of lung qi. The lung governs qi of the entire body; when diffusion and descent are normal, turbid qi descends and the intestine remains unobstructed. The transmission of the large intestine also relies on the descending power of lung qi. As stated in the Yijing Jingyi [24]: “The transmission of the large intestine depends on lung qi descending to enable its action.” Its modern pathology involves lung qi stagnation inhibiting large intestine peristalsis through the neural pathways of the lung-gut axis, while simultaneously causing intestinal microbiota imbalance through immune pathways, forming a composite pathogenesis of qi stagnation combined with intestinal dryness and fluid deficiency.

Transmission of the large intestine relies on the moistening of body fluids. The lung is the upper source of water; when lung qi descends, fluids are transported to the large intestine, the fu-viscus receives moisture, and stool passes freely. When lung heat descends, it scorches fluids; when lung deficiency fails to distribute fluids, intestinal dryness ensues. Thus, the lung and large intestine are maintained through the ascent and descent of qi movement and the metabolism of body fluids. The lung houses the corporeal soul (po), and the anus is called the “gate of the po,” establishing a further connection between them. Therefore, regulating stool inevitably requires regulating lung qi. Senile functional constipation is mostly rooted in lung yin deficiency and lung qi deficiency, often accompanied by qi stagnation, providing a basis for treating constipation from the lung [25]. With deepening research on the “gut-lung axis,” some scholars believe, from perspectives such as signaling pathways, mucosal immunity, and microbial flora, that the occurrence of constipation is closely related to the lung [26-28].

4. Clinical Application and Research of the Diffusing Lung Therapy in Functional Constipation

Traditional Chinese medicine treatment of functional constipation is based on the holistic concept and the principle of syndrome differentiation and treatment, combining medicinal and non-medicinal therapies. It can not only effectively relieve symptoms but also regulate bodily functions and reduce recurrence. The Diffusing Lung Therapy is one of the commonly used therapies in TCM, referring to the meaning of diffusing and freeing lung qi [29]. The Diffusing Lung Therapy belongs to the category of exterior-releasing treatments. Applying the approach of treating from the lung to constipation cases follows the core TCM principle of “treating the lower part by treating the upper part.” The Jin-Yuan dynasty physician Zhu Danxi first advocated the theory of “lifting the pot lid to pour out water” and applied it to the treatment of lower jiao urinary retention [30], setting a precedent for later generations. Subsequent physicians inherited this principle, and in modern clinical practice, the method of “lifting the pot lid to pour out water” is often used to diffuse, disperse, and descend lung qi, thereby

regulating constipation [31] and various other lower jiao disorders.

Relevant studies have confirmed that treating constipation from the lung may be closely related to regulating neurotransmitters in lung and intestinal tissues: by increasing the expression level of substance P (SP) while decreasing the content of vasoactive intestinal peptide (VIP), thereby exerting therapeutic effects of moistening the intestine, promoting defecation, and harmonizing the lung and intestine [32]. Through in-depth exploration of the mechanism of action of vasoactive intestinal peptide in the lung and intestine, research has confirmed that VIP is highly likely to be the key material basis maintaining the physiological connection between the lung and large intestine and enabling inter-organ interaction [33]. Pulmonary-intestinal VIP can not only regulate intestinal water-fluid metabolism [34] but also plays an important role in regulating airway smooth muscle, bronchial secretion, and pulmonary circulation, as well as in the occurrence and development of certain lung diseases (such as asthma) [35]. In summary, the imbalanced expression of neurotransmitters such as SP and VIP in lung and intestinal tissues is an important material mediator for concurrent lung-intestinal diseases and lung disease affecting the intestine. It also confirms from the molecular level the theoretical connotation of “lung and large intestine being interior-exteriorly related” in TCM, providing solid modern experimental evidence and theoretical support for the clinical application of the lung-ventilating and stool-unblocking method in treating constipation.

4.1 Treatment with Chinese Herbal Compound Formulas Using the Diffusing Lung Therapy

Chinese herbal compound formulas are composed of multiple medicinals formulated according to the principles of sovereign, minister, assistant, and envoy, achieving multi-target synergy and holistic regulation [36].

Clinical practice has demonstrated that Chinese herbal compound formulas employing the Diffusing Lung Therapy exhibit excellent therapeutic efficacy in treating functional constipation. Miao Jun and Gu Jianfei [37], based on the theory of “lung and large intestine being interior-exteriorly related,” applied Lung-Ventilating and Intestine-Moistening Decoction to treat functional constipation, fully reflecting the role of the Diffusing Lung Therapy in regulating intestinal fu-organ function. This formula makes extensive use of *Armeniacae Semen Amarum* and *Asteris Radix* to diffuse and descend lung qi, thereby unblocking and regulating the qi mechanism of the large intestine. After two courses of treatment, the total effective rate in the treatment group reached 100% (33 cases cured and 6 cases improved after the first course; 21 cases cured and 8 cases improved after the second course), significantly outperforming the control group. This suggests that Lung-Ventilating and Intestine-Moistening Decoction, by diffusing and descending lung qi, moistening the intestine, and regulating qi movement, can effectively improve colonic motility and defecatory function, providing strong clinical evidence supporting the Diffusing Lung Therapy for treating FC under the guidance of the “lung and large intestine being interior-exteriorly related” theory. Zhang Xiaojun, Han Tao, et al. [38] applied Lung-Ventilating and

Spleen-Strengthening Decoction to treat FC patients with lung and spleen qi deficiency. The study found that Lung-Ventilating and Spleen-Strengthening Decoction could not only significantly improve symptoms such as difficult defecation, post-defecation fatigue, sweating, and shortness of breath ($P < 0.05$), but also regulate serum NO and Ach levels, restore gastrointestinal hormone levels, and improve quality of life, with definite clinical efficacy ($P < 0.05$). Lao Huimin et al. [39], based on the TCM theory of “lung and large intestine being interior-exteriorly related,” systematically expounded the etiology, pathogenesis, syndrome differentiation, and treatment methods for pediatric functional constipation (FC) from the lung, and specifically emphasized the advantages of TCM herbal paste formulas in this field. They demonstrated a complete system of principle, method, formula, and medicinals for treating pediatric FC from the lung based on the “lung and large intestine being interior-exteriorly related” theory, emphasizing that treating constipation should not focus solely on the large intestine but should be grounded in the TCM holistic concept, attaching importance to its association with the lung, and conducting treatment based on syndrome differentiation. This provides new and effective ideas and methods for the clinical treatment of pediatric FC.

The Diffusing Lung Therapy frequently selects medicinals that enter the lung meridian. Both *Armeniacae Semen Amarum* and *Platycodonis Radix* belong to the lung meridian medicinally and excel at opening and diffusing lung qi as well as descending and facilitating qi movement [40]. Modern pharmacological studies indicate that bitter almond can repair the SCF/c-kit signaling pathway and upregulate the expression of connexin Cx43, thereby restoring intestinal transmission function, regulating intestinal smooth muscle activity, and ultimately improving intestinal motility and regulating fu-organ qi to promote defecation [41]. Zheng Fengjie et al. [42] found that Modified Jiegeng Decoction, formulated based on the Treatise on Cold Damage *Platycodonis Radix* Decoction as the base formula with the addition of *Fritillariae Thunbergii Bulbus* and *Asteris Radix*, could significantly improve intestinal transit function in constipation model mice. Its mechanism of action is closely related to regulating the expression levels of neuropeptides NKA and VIP in lung and intestinal tissues, suggesting that NKA and VIP may serve as key signaling substances mediating information and pathway transmission during the physiological linkage and pathological transmission between the lung and large intestine. In summary, lung-meridian medicinals such as *Armeniacae Semen Amarum*, *Platycodonis Radix*, and *Asteris Radix* all possess dual regulatory effects on both the lung and intestine. Pharmacological investigations into these fine lung-meridian medicinals also provide solid modern pharmacological evidence and theoretical support for the TCM therapeutic approach of ventilating the lung and descending qi to treat constipation.

4.2 Acupuncture, Moxibustion, and Tuina Interventions Using the Diffusing Lung Therapy

Acupuncture and moxibustion for treating constipation offer advantages such as minimal toxic side effects, definite therapeutic efficacy, and high safety, providing safe and

feasible approaches for the clinical treatment of functional constipation. Since the lung and large intestine are interior-exteriorly related, abnormal lung qi diffusion and descent leads to impaired large intestine transmission. Therefore, ventilating the lung and unblocking the fu-viscus is also an important therapeutic principle in acupuncture for constipation, assisting large intestine transmission by regulating lung qi, thereby achieving the effect of promoting defecation.

Zhang Wei et al. [43] confirmed through research that warm-needle moxibustion therapy based on the “lifting the pot lid to pour out water” theory yields significant effects in treating constipation. Compared with the control group treated solely with a self-formulated Qi-Boosting Stool-Unblocking Decoction, the treatment group receiving additional warm-needle moxibustion showed superior outcomes in overall clinical effectiveness, improvement in constipation symptoms (PAC-SYM score), enhancement of quality of life (PAC-QOL score), and reduction in adverse reaction rates. This therapy selects acupoints such as Feishu (BL13) and Taiyuan (LU9) to open and diffuse lung qi, combined with points like Zhigou (TE6), Tianshu (ST25), Dachangshu (BL25), and Zusanli (ST36) to regulate the triple burner and intestinal fu-organ function. Together with the warming and unblocking effect of moxibustion, it jointly achieves the actions of ventilating the lung, boosting qi, and unblocking and regulating the intestinal fu-viscus. This provides a safe and effective clinical protocol for treating functional constipation using the Diffusing Lung Therapy under the guidance of the “lung and large intestine being interior-exteriorly related” theory. Professor Ye Yuzhen [44], based on the “lung and large intestine being interior-exteriorly related” theory, applied pediatric tuina to treat pediatric functional constipation, offering concrete and operable practical examples and theoretical support for the Diffusing Lung Therapy in treating functional constipation. Professor Ye Yuzhen confirmed that using the lung-ventilating approach through pediatric tuina can effectively regulate lung and intestinal function and treat pediatric functional constipation. This experience holds significant reference value and potential for broader application in expanding TCM treatment approaches for functional constipation across different age groups. In the clinical intervention of functional constipation, relying on the core TCM theory of “lung and large intestine being interior-exteriorly related” and centering on the therapeutic principle of “ventilating the lung and unblocking the fu-viscus,” external TCM therapies such as acupuncture, moxibustion, and pediatric tuina are demonstrating significant advantages through their unique diagnostic and treatment approaches, with their efficacy having been fully verified in clinical practice. Current relevant studies have not only confirmed the clinical value of these therapies from intuitive dimensions such as relief of patient defecation symptoms and improvement in daily quality of life, but have also preliminarily elucidated their mechanism of action through simultaneous observation of the correlation between improvements in intestinal and pulmonary system manifestations—namely, by regulating the ascending and descending rhythm of qi movement in the lung, stomach, and large intestine, thereby restoring the normal transmission function of the large intestine. These practical data have both solidified the theoretical foundation for

applying the Diffusing Lung Therapy in treating functional constipation and provided a replicable practice paradigm for its individualized adaptation in special populations such as children.

4.3 Respiratory Training Related to the Diffusing Lung Therapy

When lung qi is deficient, the propulsive power of the large intestine for transmission correspondingly weakens, causing waste to stagnate and accumulate in the intestine, thereby leading to difficulty in defecation. Providing targeted respiratory training to such patients can not only enhance lung function to assist abdominal muscle contraction and increase intra-abdominal pressure, but also help relax the pelvic floor muscles. Under this dual effect, smooth defecation can be effectively promoted [45]. Based on the theory of “lung and large intestine being interior-exteriorly related,” respiratory training plays an important role in the treatment of functional constipation.

Liu Xihua et al. [46], based on the TCM theory of “lung and large intestine being interior-exteriorly related,” confirmed through a randomized controlled clinical trial that respiratory training has definite efficacy in improving functional constipation in stroke patients, providing modern physiological evidence supporting this theory. The treatment group, which received respiratory training in addition to conventional treatment, showed significantly greater improvement in Chronic Constipation Severity Score (CSS) compared to the group receiving conventional treatment alone ($P < 0.05$), indicating more effective relief of constipation symptoms. This study linked the TCM functions of “the lung governing qi, managing respiration, and controlling diffusion and descent” with modern physiological mechanisms of respiratory muscles, confirming that improving “lung qi” function can directly promote large intestine transmission. This provides a modern interpretation of the statement “when lung qi descends, transmission can occur,” and expands the application scenarios of the Diffusing Lung Therapy from herbal formulas to non-pharmacological rehabilitation training. As a safe and simple non-pharmacological therapy belonging to the lung-ventilating category, respiratory training can improve constipation by enhancing respiratory muscle function. This not only validates its clinical value but also deepens the theoretical connotation of “lung and large intestine being interior-exteriorly related” from an integrated Chinese-Western medicine perspective, offering new practical references for treating constipation with the Diffusing Lung Therapy. Huang Lijun [47] applied an integrated Chinese-Western medicine approach combining reverse breathing training with acupoint application of Intestine-Regulating Powder at noon and midnight hours in elderly patients with coronary heart disease complicated by constipation. The therapeutic effect was significantly superior to single conventional nursing care. This protocol effectively improved constipation symptoms, with the observation group showing significantly lower scores on the Patient Assessment of Constipation Symptoms (PAC-SYM) scale after intervention compared to the control group ($P < 0.05$), along with improvements in stool consistency, rectal discomfort, and abdominal discomfort. The protocol combines safety with operability, not only exerting the effects of ventilating the

lung and unblocking the fu-viscus against constipation but also simultaneously improving patients’ cardiac function and overall quality of life. This provides clinical reference for applying the Diffusing Lung Therapy in constipated patients with underlying diseases and holds value for broader promotion.

5. Summary and Outlook

Based on a systematic review of research progress on the Diffusing Lung Therapy in treating functional constipation, this paper further refines and enriches the modern scientific connotation of the “lung and large intestine being interior-exteriorly related” theory. By integrating traditional TCM mechanisms of qi-movement ascent and descent and mutual nourishment of body fluids with modern research on neural regulation, mucosal immunity, and gut microecology of the lung-gut axis, a more comprehensive theoretical system of lung-intestine co-treatment is constructed, addressing the limitations of previous studies that either focused solely on treating the intestine or only fragmentarily explained the lung-intestine relationship. At the same time, this paper systematically summarizes the application patterns of the Diffusing Lung Therapy across multiple approaches, including Chinese herbal compound formulas, acupuncture, moxibustion, tuina, and respiratory training, clarifying the core therapeutic principles of ventilating the lung and unblocking the fu-viscus, and moistening the lung and distributing fluids. This provides clearer and more actionable ideas for breaking through the single intestinal intervention model in clinical practice and achieving lung-intestine co-treatment, while also offering new research directions and theoretical references for treating functional constipation with traditional Chinese medicine.

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