

Current Research Status of Traditional Chinese Medicine in Functional Constipation

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Abstract: Functional constipation is a clinical syndrome characterized primarily by prolonged defecation time, reduced frequency of bowel movements, or dry and hard stools that are difficult to pass. It is a type of functional bowel disorder. Due to its lingering course, complex symptoms and signs, involvement of multiple Zang-fu organs, and lack of a unified treatment standard, it is considered a refractory disease. Traditional Chinese Medicine has documented constipation since ancient times. Modern TCM practitioners have innovated and developed treatment methods based on classical theories. This article aims to summarize the clinical treatment methods of TCM for functional constipation, providing new ideas for modern medicine in treating this condition.

Keywords: Internal Medicine of Traditional Chinese Medicine, Spleen and Stomach Diseases Specialty, Functional Constipation, Constipation, Traditional Chinese Medicine.

1. Definition and Epidemiology of Functional Constipation in Modern Medicine

Functional constipation is a clinical syndrome characterized primarily by prolonged defecation time, reduced frequency of bowel movements, or dry and hard stools that are difficult to pass. It is a type of functional bowel disorder [1]. The global prevalence is approximately 16%. Due to its lingering course, complex symptoms and signs, involvement of multiple Zang-fu organs, and lack of a unified treatment standard, it is considered a refractory disease. Long-term constipation significantly increases the risk of developing colorectal tumors, cardiovascular and cerebrovascular accidents, anxiety disorders, and other diseases [2-4]. Diagnosis is currently based on the Rome IV criteria and patient complaints [5]. The etiology of functional constipation involves dietary structure, psychological factors, medication effects, genetic factors, visceral hypersensitivity, gut microbiota dysbiosis, abnormal mucosal immune function, and lack of self-attention, among others [6-7]. From the perspective of modern medicine, the pathogenesis of constipation may be related to gastrointestinal neurotransmitters, the enteric nervous system, gut microbiota, interstitial cells of Cajal abnormalities, and other factors. Current Western medical treatments for functional constipation include dietary fiber intake, moderate exercise, establishing good bowel habits, oral laxatives, and enemas [1].

2. Understanding of Functional Constipation in Traditional Chinese Medicine

In ancient times, constipation was referred to as “hou bu li” (difficulty with defecation), “da bian nan” (difficult bowel movements), “yin jie” (yin binding), “yang jie” (yang binding), “bu da bian” (absence of bowel movements), and “pi yue” (spleen constraint). Slow-transit constipation in TCM falls under the category of “Bianmi” (constipation). TCM believes the main etiologies of constipation are inherent exuberant yang, emotional disturbance, affection by external pathogens, and aging or physical debility [8]. The “Yellow Emperor’s Inner Classic: Basic Questions” described

constipation symptoms as “hou bu li” and “da bian nan”. Zhang Zhongjing, in “Treatise on Cold Damage and Miscellaneous Diseases,” referred to constipation as “pi yue” and “da bian ying” (hard stools) [9]. The “Jingyue Quanshu” classified constipation into “yin bi” and “yang bi” [10]. Shen Jin’ao in the Qing Dynasty, in “Zabing Yuanliu Xizhu,” first mentioned the term “bianmi,” stating: “Large intestine constipation and knotting is a disease of the Kidney. The Classic says: Northern Black Water enters and connects with the Kidney, which opens into the two lower yin orifices... thus forming the pattern of constipation” [11]. TCM holds that internal and external factors such as invasion by external pathogens, emotional injury, dietary irregularities, aging and physical decline, and physical weakness after illness or childbirth can disrupt the flow of Qi, cause disharmony of the Zang-fu organs, lead to deficiency of Qi and Blood, and imbalance of Yin and Yang, easily resulting in dry stools and constipation. Modern TCM classifies constipation into Excess-type and Deficiency-type constipation. Excess-type constipation is further divided into Cold Constipation, Heat Constipation, and Qi Constipation. Deficiency-type constipation is further divided into Qi Deficiency Constipation, Blood Deficiency Constipation, Yin Deficiency Constipation, and Yang Deficiency Constipation.

3. Modern TCM Practitioners’ Treatment of Functional Constipation with TCM

1) Dong Mengmeng [12] et al. studied the combination of Jichuan Decoction and Zengye Chengqi Decoction for patients with slow-transit constipation and found significant efficacy. It effectively improved TCM pattern scores, regulated gut microbiota, enhanced gastrointestinal motility and transit function, and promoted defecation. The combination uses the principles of regulating Qi dynamics, moistening the intestines to promote defecation, and supplementing Qi and nourishing Yin. The formulation strategy of Jichuan Decoction addresses both the root and the branch, combining unblocking and supplementing. Dang Gui in the formula nourishes Blood, invigorates Blood, regulates menstruation, relieves pain, and moistens the intestines to promote defecation. Rou Cong Rong tonifies Kidney Yang,

benefits Essence and Blood, and moistens the intestines to promote defecation. Niu Xi invigorates Blood and removes stasis, tonifies the Liver and Kidney, and strengthens tendons and bones. Ze Xie promotes urination, drains Dampness, clears Heat, and resolves turbidity and lowers lipids. Zhi Ke regulates Qi in the Middle Jiao, moves stagnation, and reduces distension. Sheng Ma releases the exterior, promotes eruption, clears Heat and toxins, and raises Yang Qi [13-15]. Among them, Dang Gui and Rou Cong Rong serve together as Minister herbs; Ze Xie, Zhi Ke, and Sheng Ma serve as Assistant and Envoy herbs. The whole formula combined achieves the effects of warming the Kidney, benefiting Essence, and moistening the intestines to promote defecation [16]. In Zengye Chengqi Decoction, Xuan Shen clears Heat and cools Blood, nourishes Yin and lowers Fire, and resolves toxicity and dissipates nodules. Mai Dong moistens the Lung, nourishes Yin, benefits the Stomach, and promotes fluid production. Sheng Di Huang clears Heat and cools Blood, nourishes Yin and promotes fluid production. Da Huang purges accumulation, clears Heat, and drains Fire. Mang Xiao purges downward and unblocks the bowels, moistens dryness, and softens hardness [17-18]. The combination of these herbs can achieve the effects of supplementing Qi and nourishing Yin, and regulating the intestines to promote defecation [19].

2) Professor Xu Jingfan [20] proposed treating constipation from the Liver and Spleen. He summarized the etiology of constipation as the non-free flow of Qi, failure of the intestinal conveyance function, and retention of waste. Conventional Qi-regulating methods are relatively mild and less effective; using Qi-breaking methods to eliminate accumulation and stagnation can achieve better results. Currently, although the pathogenesis of functional constipation in Western medicine is not fully understood, it is primarily related to gastrointestinal motility disorders [21, 22]. TCM and Western medicine converge on the pathogenesis, both implicating abnormal intestinal motility. TCM's use of Qi-breaking methods enhances colonic propulsion [23, 24], which aligns with the Western medical treatment principle of promoting gastrointestinal motility. Professor Xu preferred using herbs like Zhi Shi, Bing Lang, and Lai Fu Zi to break accumulation and stagnation. Zhi Shi enters the Spleen and Stomach meridians; it breaks Qi, eliminates accumulation, resolves Phlegm, and disperses masses. Research indicates that Zhi Shi has regulatory effects on gastrointestinal movement [25]. Bing Lang enters the Stomach and Large Intestine meridians; it has the effect of "diffusing the Zang-fu organs and unblocking turbidity." Modern research shows that arecoline can enhance gastrointestinal motility, possibly through cholinergic mechanisms [26]. Lai Fu Zi enters the Lung, Spleen, and Stomach meridians; it can "direct Qi downward and relax the middle, attacking gastrointestinal accumulations and stagnation." The oils contained in Lai Fu Zi are the material basis for its purgative effect and promote gastrointestinal movement [27]. In summary, the effect of "breaking Qi" therapy in treating constipation is related to enhancing gastrointestinal motility.

3) Gu Hesheng [28] et al. believe that constipation can be treated from the Lung. They listed the theoretical basis for treating constipation from the Lung, including the exterior-interior relationship between the Lung and Large Intestine, the Lung being the upper source of water, and the

Lung governing diffusion and descent. The treatment methods from the Lung are divided into five types: supplementing Lung Qi, nourishing Lung Yin, clearing Lung Heat, diffusing Lung constraint, and descending Lung Qi. They used Sheng Shi Gao, Zhi Mu, Mai Dong, Xuan Shen, Jin Yin Hua, Lian Qiao, Zhi Zi Hua, Hu Zhang, and Gan Cao to clear Lung Heat and drain Fire, and unblock the intestines and guide out stagnation, with significant therapeutic effect.

4) Professor Ye Ling [29] believes that the Spleen and Stomach should transport, Dampness-Heat should be transformed, and Liver Qi should be soothed. Under the guidance of the "Ti-Yong philosophy," she created a series of formulas for treating constipation based on the Japanese Kampo formula Yi Zi Tang, among which Huashi Yi Zi Tang is the most commonly used. This formula consists of the original Yi Zi Tang (Da Huang, Huang Qin, Dang Gui, Chai Hu, Sheng Ma, Gan Cao) plus Bai Bian Dou, Yin Chen, and Pei Lan. The Kampo formula Yi Zi Tang is a famous formula for treating anorectal diseases, named because the colon resembles the character "乙" (Yi). Yi Zi Tang has received much attention and popularity in Japan, primarily used to treat Dampness-Heat causing intestinal wind with bleeding, patterns of Dampness, Heat, and Toxicity in the Lower Jiao, as well as hemorrhoids, rectal prolapse, and constipation. Professor Ye Ling, based on Yi Zi Tang, added Bai Bian Dou, Yin Chen, and Pei Lan to create Huashi Yi Zi Tang. In the formula, Pei Lan paired with Yin Chen, with their acrid flavor and fragrant aroma, awakens the Spleen and transforms Dampness. Combined with Bai Bian Dou's sweet flavor that supplements deficiency to strengthen the Spleen and transform Dampness. Chai Hu paired with Sheng Ma mobilizes the Qi movement of Shaoyang and Yangming, regulating the Qi dynamics of the whole body, assisting the Spleen in restoring its function of governing the Qi of the five Zang and its transporting, transforming, and raising clear Yang. Da Huang is not added later in decoction; its combination with Huang Qin is used precisely because of the exterior-interior relationship between the Lung and Large Intestine. Huang Qin is skilled at clearing Upper Jiao Dampness-Heat, while Da Huang specifically drains Excess Heat from the Stomach and Intestines. Although the dosage is light, the action is focused, achieving twice the result with half the effort. Finally, Dang Gui is added, firstly because it can nourish Blood (Blood carries Qi, preventing excessive acrid dispersion), and secondly because Dang Gui also has the function of moistening the intestines to promote defecation. The composition of the entire formula reflects Professor Ye's characteristic of emphasizing precise formulation with few herbs and accurate application.

4. Treatment of Constipation with Chinese Patent Medicines

Simo Decoction [30], despite having only four herbs, has precise medicinal effects and is widely used clinically. Many practitioners flexibly apply Simo Decoction in practice, often modifying it, such as through additions and subtractions, combination with other formulas, integration with Western medicine, or concurrent use with methods like acupoint application, broadening its clinical application scenarios for functional constipation and effectively enhancing its therapeutic outcomes. Simo Decoction used singly or

combined with modified Western medicine for functional constipation has the advantages of good clinical efficacy, low recurrence rate, ability to increase serum potassium ion concentration, and effective improvement of patient symptoms.

5. Other Characteristic TCM Therapies for Functional Constipation

Other characteristic TCM therapies, such as Tuina massage, acupuncture and moxibustion, and acupoint application [31], can also improve functional constipation by promoting gastrointestinal motility. When combined with TCM decoctions, they can enhance the clinical efficacy for functional constipation.

6. Conclusion

In today's society, patients with functional constipation are increasingly numerous, and Western medical treatment faces growing challenges. TCM documented functional constipation in ancient texts long ago. Modern TCM practitioners have expanded the understanding and treatment methods for functional constipation based on their knowledge of classical texts. Combining traditional Chinese herbal decoctions with Chinese patent medicines and characteristic TCM therapies can improve the clinical efficacy for functional constipation, providing new ideas for modern medicine in treating this condition. Beyond the conventional patterns of Yin Deficiency, Qi Deficiency, Blood Deficiency, and Yang Deficiency constipation, the concept of Dampness-Heat Constipation has been proposed, offering modern TCM practitioners new methods for treating constipation.

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