

# Traditional Chinese Medicine for the Treatment of Diarrhea

Linying Peng<sup>1</sup>, Xiaoquan Du<sup>2,\*</sup>

<sup>1</sup>Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

<sup>2</sup>Affiliated Hospital of Shaanxi University of Chinese Medicine, Xianyang 712000, Shaanxi, China

\*Correspondence Author

**Abstract:** Clinically, diarrhea can present either as an independent disease or as a symptom secondary to other illnesses. Owing to changes in people's dietary habits and patterns, coupled with the impacts of high-pressure environments and fast-paced lifestyles, the incidence of this condition has been increasing annually. Notably, TCM has demonstrated unique advantages in alleviating clinical symptoms and providing preventive and rehabilitative care for diarrhea.

**Keywords:** Traditional Chinese Medicine (TCM), Diarrhea.

## 1. Introduction

Diarrhea is a medical condition primarily characterized by increased defecation frequency, loose or watery stools, and sometimes even watery discharge. In ancient times, the condition where stools were soft and slow-moving was termed "Xie", while the condition where stools flowed rapidly like clear water was called "Xie". Thus, it is generally classified under the general term "Xie Xie", a common digestive system disorder whose incidence has been gradually increasing in recent years [1].

With the advancement of technology and the improvement of human living standards, the pace of life has accelerated, and dietary patterns have continuously changed. In particular, alterations in food composition may disrupt the normal functioning of the gastrointestinal system, leading to long-term diarrhea and other problems. Diarrhea is often caused by external pathogenic factors, dietary impairment of the spleen and stomach, emotional disorders, congenital deficiencies, and long-term illness-induced organ weakness. Its pathogenesis mainly involves the dysfunction of the spleen and stomach in transportation and transformation, as well as the abnormal conduction function of the large intestine.

## 2. The Etymological Origin of the Term "Xie Xie" (Diarrhea)

The term "Xie Xie" (diarrhea) was first documented in Zhang Gao's Medical Opinions, where he described: "Suffering from prolonged diarrhea, the patient took warming herbs to tonify the spleen and diuretics, but all treatments failed. The physician diagnosed a weak heart pulse, administered herbs to tonify heart qi and the spleen, and the patient recovered" [2]. In Syndromes and Treatises on the Three Causes of Diseases, Chen Wuzhe stated: "Diarrhea described in medical texts, including 'dong xie' (hole diarrhea), 'sun xie' (undigested food diarrhea), 'tang xie' (loose stool diarrhea), 'ru xie' (moist diarrhea), and 'shui gu zhu xia' (watery discharge), essentially refers to the same condition." This indicates that despite the numerous different names, they all refer to the same disease, "Xie Xie" (diarrhea) [3].

## 3. The Etiology and Pathogenesis of Diarrhea

### 3.1 The Etiology of Diarrhea

#### 3.1.1 Invasion of External Pathogenic Factors

"Exposure to wind leads to fever and chills. Thus, wind injury in spring causes pathogenic factors to linger, resulting in 'dong xie' (hole diarrhea)." "When cold invades the intestines, it causes borborygmus and 'sun xie' (undigested food diarrhea)." "All vomiting with acid regurgitation, sudden watery diarrhea, and tenesmus are attributed to heat syndrome."

#### 3.1.2 Internal Injury Caused by Emotional Factors

Emotional factors are mostly associated with the liver and spleen. Prolonged pensiveness leads to liver qi stagnation; the stagnated liver qi then rebels and invades the spleen, resulting in qi obstruction, impaired transportation and transformation of the spleen, and ultimately the onset of diarrhea [4].

#### 3.1.3 Dietary Indiscretion

"Individuals with improper diet and irregular daily routines... develop 'sun xie' (undigested food diarrhea)." "Excessive food intake impairs the gastrointestinal tract."

#### 3.1.4 Intrinsic Physical Debility

"In patients with spleen disorders, deficiency leads to abdominal distension, borborygmus, 'zhi xie' (cockcrow diarrhea), and undigested food in stools." "Deficiency of the stomach meridian leads to diarrhea."

Overall, the onset of diarrhea is closely associated with disorders of wind, cold, dampness, heat, diet, constitution, and emotions.

### 3.2 The Pathogenesis of Diarrhea

The fundamental pathogenesis of diarrhea is "spleen deficiency with dampness excess". As the pivotal organ for

the ascending and descending of qi in the human body, the spleen and stomach govern the circulation of qi, blood, yin, and yang. When the qi movement of the spleen and stomach is disrupted, accompanied by dysfunction in transportation and transformation, the clear qi fails to ascend while the turbid qi fails to descend, leading to disordered qi movement throughout the body and impairment of visceral functions.

The human body is an integrated whole where zang-fu organs and tissues function in coordination and harmony. Specifically, the liver governs dispersion and discharge, the heart governs blood circulation, the spleen governs transportation and transformation, the lung governs water metabolism, and the kidney governs water regulation. Dysfunction of these zang-fu organs, in turn, impairs the normal ascending and descending movement of qi in the spleen and stomach.

## 4. The Therapeutic Approaches for Diarrhea

Ancient physicians accumulated extensive experience in the treatment of diarrhea. Among their approaches, the “Nine Methods for Treating Diarrhea”—including “dampness-resolving with bland-tasted herbs,” “ascending and lifting,” “cooling and clearing,” “dredging and resolving,” “moderating with sweet-tasted herbs,” “astringing with sour-tasted herbs,” “drying the spleen,” “warming the kidney,” and “securing and astringing”—as documented in *Yizong Bidu* (Essential Readings in Medical Classics), have been passed down to the present day.

Modern physicians, building on the inheritance of traditional Chinese medicine (TCM) theory and through extensive clinical research, have summarized a variety of effective therapeutic regimens, primarily encompassing internal treatment and external treatment.

Internal treatment primarily includes TCM decoctions and dietary therapy, while external treatment mainly encompasses acupuncture, tuina massage, and acupoint application.

### 4.1 Internal Treatment

#### 4.1.1 Invasion of External Pathogenic Factors

Patients’ symptoms are mainly characterized by watery diarrhea, accompanied by abdominal pain, borborygmus, abdominal distension, and anorexia. They are also associated with chills, fever, limb soreness, and vomiting. For such cases, *Huoxiang Zhengqi San* (a TCM formula) can be administered to dispel external cold and resolve turbid qi. Alternatively, patients may present with diarrhea accompanied by abdominal pain, urgent defecation, yellow and foul-smelling stools, anal burning sensation, and dark yellow, scanty urine; in such instances, *Gegen Qinlian Tang* (a TCM formula) is indicated to clear heat and eliminate dampness [5].

#### 4.1.2 Liver Qi Overacting on the Spleen

Patients’ main symptoms include chest and hypochondriac distension, belching, and reduced appetite; abdominal pain and diarrhea may occur when they are emotionally stressed. This condition arises from liver Qi stagnation, where

stagnated liver Qi rebels and overacts on the spleen (the “Earth” element in TCM five-element theory), leading to impaired transportation and transformation function of the spleen. Consequently, the clear and turbid Qi mix and descend abnormally, resulting in diarrhea. As stated in *Yifang Kao* (A Study of Medical Formulas), “Diarrhea is attributed to the spleen, pain to the liver; the liver is characterized by excess, while the spleen by deficiency. The coexistence of spleen deficiency and liver excess thus leads to painful diarrhea.” This precisely describes the aforementioned syndrome [6]. For this syndrome, *Tongxie Yaofang* (Painful Diarrhea Decoction) is administered to soothe the stagnated liver Qi, invigorate the ascending and transporting function of the spleen Qi, and achieve the therapeutic effect of suppressing the liver and supporting the spleen.

#### 4.1.3 Spleen-Stomach Deficiency

Patients typically present with intermittent loose stools that persist for a long time. Accompanying symptoms include anorexia and a feeling of fullness/discomfort after eating; their stool frequency increases significantly after consuming fatty foods. Systemic manifestations involve sallow complexion, fatigue, and in severe cases, rectal prolapse. On examination, the tongue is pale with a white coating, and the pulse is thready and weak [7].

For this syndrome, *Shenling Baizhu San* (a TCM formula) is administered to replenish qi and invigorate the spleen. In cases where patients present with persistent diarrhea, middle qi sinking (a TCM syndrome), rectal prolapse, shortness of breath, and anorexia, *Buzhong Yiqi Wan* (Middle Qi-Tonifying Pill, a TCM formula) can be administered in combination with the previously mentioned regimen. In cases where patients present with watery diarrhea, abdominal borborygmus and cold pain, and cold extremities, the condition corresponds to spleen-yang deficiency with internal exuberance of yin-cold. For such cases, *Fuzi Lizhong Wan* (Aconite-Regulating Middle Pill, a TCM formula) is administered to warm the spleen and stomach yang, invigorate the spleen, and dry dampness.

#### 4.1.4 Spleen-Kidney Yang Deficiency

Patients typically present with abdominal pain at dawn, accompanied by borborygmus and diarrhea, as well as cold sensations in the body and extremities, and soreness and weakness of the waist and knees. This condition is attributed to kidney yang insufficiency and decline of vital gate fire (a TCM concept referring to deficient kidney yang), which causes the spleen and stomach to lose their warming support, leading to impaired transportation and transformation function. Clinically, it is also known as “five-watch diarrhea” (a TCM term for dawn diarrhea). Since yin-cold is relatively exuberant at dawn, patients experience abdominal pain, and diarrhea occurs immediately after borborygmus. For this condition, *Sishen Wan* (Four-Shen Pill, a TCM formula) is administered to warm the kidney, invigorate the spleen, and astringe the intestines to stop diarrhea, which aims to restore exuberant vital gate fire and enhance the spleen yang’s warming function.

#### 4.1.5 Improper Diet

Patients typically present with abdominal pain, borborygmus, and diarrhea with stools that smell like rotten eggs; abdominal pain tends to alleviate after defecation. Additional symptoms include epigastric and abdominal distension with a feeling of fullness, as well as anorexia. For this condition, Baohe Wan (Digestive-Harmonizing Pill, a TCM formula) is administered to promote digestion and relieve food stagnation.

## 4.2 External Treatment

TCM external treatment acts directly on the affected site, exerts rapid therapeutic effects, and is convenient to administer; thus, it is a widely used therapeutic modality in clinical practice.

### 4.2.1 Acupuncture

Sun Yuanzheng et al. [8] adopted a combined approach of acupuncture and electroacupuncture to manage bowel dysfunction induced by depression. This intervention effectively reduced symptoms such as abdominal pain and diarrhea in patients and improved their quality of life. From a modern medical perspective, Geng Hao et al. [9] investigated differences among connected brain regions using the hippocampus as the seed region, and explored the mechanism of action of acupuncture therapy. They concluded that acupuncture can modulate abnormal neural activity in limbic system-neocortex-associated brain regions and brain areas responsible for emotion regulation. Concurrently, it reduces scores on the Hamilton Anxiety Rating Scale (HAMA), enhances resilience to visceral hypersensitivity, and ultimately improves fecal satisfaction and quality of life in patients. A study by Yu Leimin et al. [10] demonstrated that umbilical acupuncture may alleviate diarrhea symptoms in patients with irritable bowel syndrome with diarrhea (IBS-D) by regulating the secretion of relevant brain-gut peptides; it also relieves anxiety and depressive symptoms in these patients. Compared with probiotic medications, umbilical acupuncture exhibits similar efficacy, is more convenient to administer, has fewer side effects, and is more preferred by patients.

### 4.2.2 Moxibustion

Lingshu Jing·Guanneng (a classic text of Traditional Chinese Medicine, TCM) states: “Where acupuncture is ineffective, this is where moxibustion is indicated.” To balance liver and stomach function, enhance renal vitality, and promote intestinal patency, Wang Yina et al. [11] selected acupoints with high therapeutic sensitivity (e.g., Guanyuan [CV4], Tianshu [ST25], and Mingmen [GV4]) as intervention sites. The study demonstrated that this acupoint stimulation therapy exerts a significant effect on alleviating dyspepsia and provides adjuvant effects in addressing anxiety disorders. Similarly, Huang Haiqiong et al. [12] demonstrated that moxibustion can stimulate the spinal nervous system, thereby dispelling cold-dampness (a TCM pathogenic factor) and ultimately alleviating gastrointestinal discomfort symptoms (e.g., diarrhea). Furthermore, Chen Xi et al. [13] employed salt-separated moxibustion combined with minimally invasive abdominal procedures. This combined intervention not only improved the cure rate but also exhibited greater advantages over conventional medications (e.g., antibiotics

and analgesics).

### 4.2.3 Tuina (Chinese Massage)

Lai Shuangling et al. [14] employed Tuina (Chinese Massage) combined with medication to regulate the levels of 5-hydroxytryptamine (5-HT), thereby improving gastrointestinal motility. The Tuina techniques they selected were those focused on soothing the liver and regulating qi (a TCM therapeutic principle). Ye Xinhua [15] aimed to alleviate symptoms of functional diarrhea. To this end, he applied pressure to the spleen-stomach and large intestine regions using the pulp of the thumb, provided targeted stimulation to diarrhea-related areas, and following a comprehensive foot massage, performed specific massage on the reflex zones corresponding to the spleen, stomach, kidneys, bladder, digestive tract, lymph nodes, and abdominal plexus. Each treatment course lasted 7 days. Tang Shuntian et al. [16] successfully treated 90 children with chronic diarrhea using TCM manipulative techniques. This approach is convenient to administer; furthermore, children exhibit good adaptability to Tuina therapy, leading to high acceptance among both children and their parents. The study confirmed that Tuina therapy is effective in the treatment of pediatric diarrhea.

### 4.2.4 Acupoint Application

Zhao Yongchao et al. [17] concluded that administering a combined therapy of gastrointestinal sedatives and pain-relieving, antidiarrheal, and mind-calming herbal tea to patients with IBS-D exerts dual effects. Specifically, it enhances spleen-stomach function to eliminate dampness and regulate the flow of liver qi; concurrently, it calms the mind, thereby achieving a soothing effect on mental wellbeing. Cao Guowu et al. [18] demonstrated that the application of specific acupoint application therapy combined with Western medicine can significantly alleviate patients' disease severity and reduce associated discomfort. Concurrently, it regulates the brain-intestinal connection, thereby reducing feelings of anxiety or depression and effectively controlling excessive defecation frequency. Liu Xiaona [19] used the “Hechang Zhixie Plaster” (Intestine-Harmonizing and Antidiarrheal Plaster) to manage disease-related abdominal distension in patients. Among the treated patients, 36.7% (over one-third) achieved complete recovery, while nearly 40% (two-fifths) exhibited significant signs of improvement; the therapeutic efficacy was superior to that of the control group.

In summary, TCM offers diverse approaches for the treatment of diarrhea. Specifically, these methods are administered based on patients' clinical symptoms and following syndrome differentiation; additionally, the aforementioned therapeutic approaches can be used in combination. Notably, integrating internal and external treatments more effectively enhances therapeutic efficacy, and the clinical outcomes are more pronounced when these approaches are applied in clinical practice.

## 5. Conclusion

The main etiological factors of diarrhea include exposure to external pathogens, visceral deficiency, and disharmony

between diet and emotions. These factors ultimately lead to diarrhea due to dysfunction in the transportation and transformation of the spleen and stomach, which results in the small intestine's failure to separate the clear from the turbid and the large intestine's impaired transmission and transformation.

The pathogenesis is primarily attributed to qi deficiency of the spleen and stomach. Functionally, the spleen governs transportation and transformation, while the stomach is responsible for reception of food and fluids; collectively, the spleen and stomach are regarded as the "root of postnatal (acquired) constitution" in TCM. Factors such as dietary imbalance, overwork-induced internal injury, or prolonged illness leading to visceral deficiency can all result in spleen-stomach deficiency, thereby impairing the spleen and stomach's ability to receive food and fluids and transform and transport nutrients. Retention of undigested food and fluids occurs, followed by failure to separate the clear from the turbid; the mixture then descends downward, ultimately leading to diarrhea.

Secondarily, the pathogenesis involves deficiency of mingmen fire (a TCM concept referring to the vital fire of the kidney-adrenal system). This deficiency impairs the ability to warm and nourish the spleen (symbolically termed "spleen earth" in TCM) and assist in its function of ripening and transforming food and fluids, thereby leading to dysfunction in spleen transportation and ultimately resulting in diarrhea.

Additionally, there exists a pathological pattern involving rebellious liver qi invading and restricting the spleen (symbolically referred to as "spleen earth" in TCM five-element theory).

Additionally, dietary indiscretion leads to retention of undigested food in the middle jiao (the middle energizer, corresponding to the spleen and stomach region in TCM). This stagnation further transforms into internal heat, subsequently giving rise to damp-heat (a TCM pathogenic factor), and ultimately leading to diarrhea. When the spleen fails to function properly in transportation and transformation (a state termed "spleen failing to maintain normal transportation" in TCM), its ability to transport and transform body fluids becomes impaired. This dysfunction readily leads to the formation of a pathological product—dampness (a TCM pathogenic factor). In turn, dampness further encumbers the spleen, exacerbating diarrhea and ultimately resulting in persistent diarrhea that is difficult to resolve.

Therefore, in clinical practice, it is essential to place equal emphasis on not only tonifying and strengthening spleen-stomach qi but also eliminating dampness; neither of these two approaches can be neglected.

Traditional Chinese Medicine (TCM) culture is a treasure of Chinese traditional culture. Notably, TCM has demonstrated unique advantages in alleviating clinical symptoms of diarrhea, among other conditions, and has been widely recognized. Characterized by a holistic perspective, TCM adopts a distinctive approach to treating this disease through syndrome differentiation-based treatment, which considers the functions of all visceral organs throughout the body. This

therapeutic strategy yields significant efficacy, with fewer adverse effects and a high safety profile.

## References

- [1] Lin Wei. A Brief Analysis of Professor Zhang Hongyi's Experience in Treating Diarrhea [J]. *Inner Mongolia Journal of Traditional Chinese Medicine*, 2015, 34(4): 46.
- [2] Chen Cheng, Xiong Xiuping. Experience of Miao Xiyong in Treating Diarrhea [J]. *Henan Journal of Traditional Chinese Medicine*, 2019, 39(4): 521-523.
- [3] Yuan Ziyun, Du Xiaoquan. Prof. Du Xiaoquan's Experience in Treating Diarrhea from the Perspective of Dampness: A Selection of Key Insights [J]. *Asia-Pacific Journal of Traditional and Complementary Medicine*, 2020, 16(7): 86-87.
- [4] Yuan Xuchao, Wang Jiehong, Wang Kangyong et al. Diagnostic and Therapeutic Implications of Diarrhea-related Discourses in Huangdi Neijing (Inner Canon of the Yellow Emperor) for Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. *Liaoning Journal of Traditional Chinese Medicine*, 2016, 43(9): 1871-1873.
- [5] Yang Yang. Dream of the Red Chamber and Traditional Chinese Medicine (Part 39): Diarrhea Caused by Dietary Indiscretion: Syndrome Differentiation-based Treatment According to Etiology [J]. *Beneficial to Open a Book (Seeking Medical Advice & Asking for Medicines)*, 2014, (5): 75.
- [6] Wang Dan, Li Hui, Tian Yaozhou et al. Progress in Traditional Chinese Medicine Treatment of Irritable Bowel Syndrome with Diarrhea (IBS-D) Complicated by Anxiety and Depression [J]. *Yunnan Journal of Traditional Chinese Medicine and Materia Medica*, 2022, 43(7): 93-96.
- [7] Gao Fang. Modified Buzhong Yiqi Decoction via Enema for Treating 62 Cases of Chronic Diarrhea [J]. *Guangming Journal of Traditional Chinese Medicine*, 2014, 29(6): 1209-1210.
- [8] Sun Yuanzheng, Wang Shilin, Yu Tianyang. "Mind-Regulating Acupuncture" Combined with Electroacupuncture for Treating Irritable Bowel Syndrome with Diarrhea (IBS-D): A Randomized Controlled Trial [J]. *Chinese Acupuncture & Moxibustion*, 2021, 41(1): 13-16.
- [9] Geng Hao, Weng Shengjie, Zhao Tingting et al. Exploring Central Regulatory Mechanisms of Mind-Regulating and Spleen-Strengthening Acupuncture in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) Based on Seed-Based Correlation Analysis [J]. *Acupuncture Research*, 2021, 46(4): 318-325.
- [10] Yu Leimin, Zhang Yali, Wang Yanwu et al. Efficacy of Umbilical Acupuncture in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) and Its Impact on Brain-Gut Peptides [J]. *World Chinese Journal of Digestology*, 2020, 28(13): 538-543.
- [11] Wang Yina, Zeng Youhua, Zhu Min. Effects of Thermal-Sensitive Moxibustion on Quality of Life and Mental State in Patients with Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. *Zhejiang Journal of Traditional Chinese Medicine*, 2020, 55(8): 613.

- [12] Huang Haiqiong, Fang Fang, Zhai Yixin et al. Clinical Study on Du Meridian Moxibustion for Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. Journal of New Chinese Medicine, 2019, 51(9): 241-243.
- [13] Chen Xi, Zhou Yu, Zhang Meng et al. Clinical Efficacy Observation of Acupuncture Combined with Salt-Separated Moxibustion in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) of Spleen-Deficiency Type [J]. Shanghai Journal of Acupuncture and Moxibustion, 2021, 40(4): 400-405.
- [14] Lai Shuangling, Zhang Weixing. Clinical Efficacy of “Liver-Soothing and Qi-Regulating, Mind-Regulating and Depression-Relieving” Tuina (Chinese Massage) Combined with Western Medicine in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. Journal of Zhejiang Chinese Medical University, 2017, 41(7): 628-631.
- [15] Ye Xinhua. Clinical Efficacy Observation of Tuina (Chinese Massage) in Treating Functional Diarrhea [J]. Journal of Practical Traditional Chinese Medicine, 2008, (1): 37.
- [16] Tang Shuntian, Zhang Leilei. Tuina (Chinese Massage) Therapy for Treating 45 Cases of Chronic Diarrhea in Children [J]. Chinese Journal of Traditional Chinese Medicine and Technology, 2020, 27(1): 107.
- [17] Zhao Yongchao, Zhang Xijie, Zhou Yunfei. Clinical Study on Tongxie Anpi Decoction Combined with Changwei Powder Application in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. Journal of New Chinese Medicine, 2020, 52(15): 102-105.
- [18] Cao Guowu, Kang Hui. Clinical Effect of Acupoint Application Combined with Routine Western Medicine in Treating Irritable Bowel Syndrome with Diarrhea (IBS-D) [J]. Clinical Research and Practice, 2019, 4(11): 91-93.
- [19] Liu Xiaona, Guo Xiaole, Wang Fuchun. Clinical Study on Hechang Zhixie Acupoint Plaster in Treating Functional Diarrhea [J]. Journal of Clinical Acupuncture and Moxibustion, 2012, (11): 1-4.