



ACUPUNCTURE TECHNIQUES

## Using Traditional Chinese Medicine for Irritable Bowel Syndrome

DIGITAL EXCLUSIVE

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)<sup>1</sup> defines irritable bowel syndrome (IBS) as a digestive disorder that affects the large intestine causing symptoms such as abdominal cramping, abdominal bloating, and a change in bowel habits. There are three types of IBS: IBS with constipation, IBS with diarrhea, and IBS with mixed bowel habits. There is no known cause of IBS and no specific test for it. However, medical doctors can run tests such as stool sampling tests, blood tests, x-rays, or colonoscopy to rule out other diseases.<sup>1-2</sup>

The NIDDK also suggests 12 percent of people in the U.S. suffer from IBS. Women are twice more likely to develop IBS than men, and it is more common among people younger than 50 years old. Chance of developing IBS increases if one has a family history of IBS, a history of stressful or traumatic life events, and a history of infection in gastrointestinal tract. Most people who develop IBS often have other health concerns such as fibromyalgia, chronic fatigue syndrome, dyspepsia, gastroesophageal reflux disease, anxiety, and depression.<sup>1-2</sup>

Subhead 1



Most of those diagnosed with IBS can control their symptoms through diet, stress management, probiotics, conventional medicine, and complementary medicine such as Traditional Chinese Medicine (TCM).<sup>1-2</sup> TCM has been used for thousands of years to treat disorders of various systems including the digestive system. Number of studies will be discussed to show the efficacy and safety of TCM when treating IBS.

Traditional Chinese medicine (TCM) is a broad term used to gather multiple modalities. These modalities include: acupuncture, moxibustion (heat therapy with use of mugwort), Chinese herbal medicine, nutrition/lifestyle, tuina (Asian body works), and qi-gong. In the Western Hemisphere, acupuncture and Chinese herbal medicine are the most recognized modalities out of all. Acupuncture and Chinese herbal medicine have been used throughout history to treat various different illnesses such as cardiovascular disorders, mental disorders, gynecological disorders, musculoskeletal disorders, neurological disorders, and digestive disorders.<sup>3-4</sup>

Acupuncture is performed by inserting acupuncture needles into specific acupuncture points in the body to facilitate the flow of Qi (vital energy or life force), blood, and bodily fluids throughout the meridians and bring one's health into harmony.<sup>3-4</sup> Acupuncture has a long history. First record that refers to a system of meridians is dated around 198 BCE. The Yellow Emperor's Classic of Internal Medicine which dates about 100 BCE describes an organized system of diagnosis and treatment which is recognized as acupuncture today. The concept of meridians and how Qi circulates throughout them was well recognized by this time period.<sup>5</sup>

## Subhead 2

Acupuncture is found to relieve abdominal pain and distention, regulate bowel movements, and reduce tension and stress by optimizing the functions of the digestive organs and aiding in release of hormones and neurotransmitters. Li and Li states:

Acupuncture can regulate visceral reflex activity, gastric emptying, and acid secretion through affecting various endogenous neurotransmitter systems. Studies have shown that the application of acupuncture targeting serotonergic, cholinergic, and glutamatergic pathways in IBS patients can increase the concentration of endogenous opioids, which in turn reduces visceral and global pain perception.<sup>6</sup>

Study conducted by Zheng, et al. showed the effectiveness of electro-acupuncture for treating patients with diarrhea prominent IBS (IBS-D). The result of the study showed that electro-acupuncture was equivalent to the use of pharmaceutical loperamide in reducing stool frequency in patients with IBS-D. Additionally, electro-acupuncture improved stool consistency, the number of days with normal defecation, and quality of life for patients.<sup>7</sup>

Qin, Yi, Lin, Yang, & Zhuang conducted a randomized controlled trial and compared the efficacy differences between abdominal acupuncture and pharmaceutical intervention when treating IBS-D. 50mg of pinaverium bromide tablet was administered orally 3 times a day to one group while abdominal acupuncture was given 3 times a week to another group. After 4 weeks of treatment in both groups, the result was that abdominal acupuncture was more effective than use of pinaverium bromide in relieving symptoms of IBS-D.<sup>8</sup>

### Herbal Treatment

Chinese herbal medicine is a vital part of TCM. The term "herbal medicine" is often misleading as the traditional Chinese Materia Medica includes minerals and animal parts as well as herbs.<sup>9</sup> In Chinese herbal medicine, multi-herb formulae is commonly used where multiple different ingredients from Chinese Materia Medica are used together to treat specific conditions and disease patterns.<sup>10</sup> One can administer the multi-herb formulae through a form of water decoction, granule, powder, or pills.<sup>9</sup> Practitioners of TCM should thoroughly investigate each patient's presentation and choose an herbal formula that best suits one's case.

Shun Qi Tong Xie (SQTX) is a Chinese herbal formula commonly used to treat symptoms of IBS. SQTX can reduce abdominal pain, abdominal distention, and diarrhea. Ingredients of SQTX are Bai Shao (*Paeonia Radix alba*), Bai Zhu (*Atractylodis macrocephalae Rhizoma*), Xie Bai (*Alli macrostemi Bulbus*), Che Qian Zi (*Plantaginis Semen*), Fo Shou (*Citri sacrodactylis Fructus*), and Bo He You (*Oleum Mentha haplocalycis*).<sup>11-13</sup> Wang, et al. states:

TCM has a long history spanning thousands of years, dealing with abdominal pain and diarrhea. In recent years, a group of studies confirmed the efficiency of TCM treatment on IBS. As the most common type of IBS, IBS-D is characterized by abdominal pain/discomfort and diarrhea, mainly accompanied with emotional instability, which is the exact indication of SQTX Granule in our study. Pharmacological and toxicological research with SQTX Granule demonstrated the efficacy and safety in preclinical trials, respectively, and phase II clinical trials also indicate the improvement of symptoms without significant adverse events.<sup>13</sup>

Tong Xie Yao Fang (TXYF) is another very well-known Chinese herbal formula used to treat symptoms of IBS. TXYF contains four ingredients: Chao Bai Zhu (dry-fried *Atractylodis macrocephalae Rhizoma*), Chao Bai Shao (dry-fried *Paeoniae Radix alba*), Chao Chen Pi (dry-fried *Citri reticulatae Pericarpium*), and Fang Feng (*Saposhnikoviae Radix*). According to the classical texts, TXYF is used to tonify the Spleen, soften the Liver, expel dampness, and stop diarrhea. This formula is often used to treat variety of biomedically-defined digestive disorders.<sup>11-12, 14,15</sup>

Pan, et al. studied the clinical effects of TXYF in treating IBS-D and the possible mechanism of the herbal formula. The conclusion was that TXYF is an effective herbal formula for the treatment of IBS-D because it showed decrease in abdominal pain and distention, improvement in the stool quality, and improvement of the emotional health in patients. The study hypothesizes that TXYF's mechanism of action may be through its ability to adjust activation of mast cells to decrease visceral hypersensitivity.<sup>16</sup> Li, et al. found that TXYF treats IBS by lowering 5-HT levels.<sup>17</sup> 5-HT regulates sensory, motor, and secretory functions of the digestive system and play an important role in pathophysiology of IBS.<sup>18-19</sup> Li, et al. also states that certain ingredients in TXYF such as Bai Zhu and Fang Feng can relieve symptoms of IBS by affecting microbiota species in the gut flora.<sup>17</sup> Chen, et al. conducted a double-blind placebo-controlled randomized trial to study the efficacy of TXYF for treating IBS-D. The study concluded that use of TXYF was superior to placebo in controlling symptoms of IBS-D with low adverse event rate.<sup>20</sup>

As the research studies discussed above shows, acupuncture and Chinese herbal medicine can help decrease symptoms of IBS effectively and safely without the adverse effects that often comes with pharmaceutical intervention. Acupuncture and Chinese herbal medicine are shown to treat symptoms of IBS by optimizing functions of digestive organs, regulating hormones and neurotransmitters, improving bowel movements, reducing abdominal pain and distention, and stabilizing moods.

### Treating IBS

Irritable Bowel Syndrome (IBS) is prevalent in the United States where 12 percent of the population are diagnosed with the disorder. Treatments include diet changes, stress management, probiotics, conventional medicine, and complementary medicine such as acupuncture and Chinese herbal medicine.<sup>1-2</sup> Acupuncture and Chinese herbal medicine can safely and effectively help patients with IBS without adverse effects that are often presented with invasive procedures of conventional medicine and pharmaceutical uses. Acupuncture decreases abdominal pain by affecting the concentration of endogenous opioids and can regulate visceral reflux activity, gastric emptying, and acid secretion.<sup>6</sup> Acupuncture overall relieves symptoms of IBS by facilitating and enhancing the functions of digestive organs, regulating bowel habits, assisting in release of hormones and neurotransmitters, reducing abdominal pain and bloating, and stabilizing stress and anxiety that can contribute to IBS.<sup>7-8</sup>

Chinese herbal medicine such as Shun Qi Tong Xie (SQTX) and Tong Xie Yao Fang (TXYF) can greatly reduce symptoms of IBS. SQTX was found to reduce abdominal pain, abdominal discomfort and diarrhea that are mainly accompanied with emotional instability.<sup>13</sup> Studies showed that TXYF decreases abdominal pain and distention, improves the stool quality, and stabilizes emotional health in patients better than pharmaceutical interventions. TXYF treats symptoms of IBS through its ability to adjust activation of mast cells to decrease visceral hypersensitivity,<sup>14</sup> its ability to lower 5-HT levels, and its ability to affect microbiota species in the gut flora.<sup>17</sup>

More conducted studies would be beneficial in gaining additional measurements on safety and efficacy of acupuncture and Chinese herbal medicine when treating symptoms of IBS. Regardless, acupuncture and Chinese herbal medicine is recommended to be a part of the treatment plan for those suffering from IBS.

### References

1. National Institute of Diabetes and Digestive and Kidney Diseases. Definition & Facts for Irritable Bowel Syndrome. *U.S. Department of Health & Human Services*, Nov 2017.
2. National Institute of Diabetes and Digestive and Kidney Diseases. Irritable Bowel Syndrome. *Medline Plus*, 1 Mar 2018.
3. Deadman P, Mazin A, et al. *A Manual of Acupuncture*. East Sussex, England: Journal of Chinese Medicine Publications, 2007.
4. Deng L, Gan Y, et al. *Chinese Acupuncture and Moxibustion*. Beijing, China: Foreign Languages Press, 1987.
5. Ernst A. A Brief History of Acupuncture. *Rheumatology*, 2004;43(5): 662-663.
6. Li C, Li S. Treatment of irritable bowel syndrome in China: A review. *World Journal of Gastroenterology*, 2015; 21(8), 2315-2322.
7. Zheng H, Li Y, et al. Electroacupuncture For Patients With Diarrhea-Predominant Irritable Bowel Syndrome or Functional Diarrhea: A Randomized Controlled Trial. *Medicine*, 2016; 95(24), e3884.
8. Qin Y, Yi W, et al. Clinical Effect of Abdominal Acupuncture for Diarrhea Irritable Bowel Syndrome. *Zhongguo Zhen Jiu*, 2017; 37(12): 1265-1268.
9. Ergil K., Kramer E, et al. Chinese Herbal Medicines. *Western Journal of Medicine*, 2002;176(4): 275-279.
10. Yi Y, Chang I. An Overview of Traditional Chinese Herbal Formulae and a Proposal of a New Code System for Expressing the Formula Titles. *Evidence-Based Complementary and Alternative Medicine*, 2004; 1(2): 125-132.
11. Bensky D, Clavey S, et al. *Chinese Herbal Medicine: Materia Medica, 3rd Edition*. Seattle: Eastland Press, 2004.
12. Brand E, Wiseman N. *Concise Chinese Materia Medica*. Taos, NM: Paradigm Publications, 2008.
13. Wang X, Luo R, et al. Traditional Chinese Medicine (Shun-Qi-Tong-Xie Granule) For Irritable Bowel Syndrome: Study Protocol For a Randomised Controlled Trial. *Trials Journal*, 2014; 15:273.
14. Maclean W, Lyttleton J. *Clinical Handbook of Internal Medicine: The treatment of Disease with Traditional Chinese Medicine, Volume 2*. Sydney, Australia: University of Western Sydney, 2002.
15. Scheid V, Bensky D, et al. *Chinese Herbal Medicine: Formulas & Strategies, 2nd Edition*. Seattle, WA: Eastlands Press, 2009.
16. Pan F, Zhang T, et al. Effect of Tong Xie Yao Fang Granule in Treating Diarrhea-Predominate Irritable Bowel Syndrome. *Chinese Journal of Integrative Medicine*, 2009; 15(3), 216-219.
17. Li J, Cui H, et al. Tong-Xie-Yao-Fang Regulates 5-HT Level in Diarrhea Predominant Irritable Bowel Syndrome Through Gut Microbiota Modulation. *Frontiers in Pharmacology*, 2018; 9:1110.
18. Gershon M, Track J. The Serotonin Signaling System: From Basic Understanding To Drug Development for Functional GI Disorders. *Gastroenterology*, 2007; 132(1), 397-414.
19. Stasi C, Bellini M, et al. Serotonin Receptors and Their Role in the Pathophysiology and Therapy of Irritable Bowel Syndrome. *Techniques in Coloproctology*, 2014; 18(7), 613-621.
20. Chen M, Tang T, et al. Randomized Clinical Trial: Tong-Xie-Yao-Fang Granules Versus Placebo for Patients with Diarrhea Predominant Irritable Bowel Syndrome. *Alimentary Pharmacology & Therapeutics*, 2018; 48(2).

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