

Advances in Clinical Research on Traditional Chinese Medicine for Treating Postoperative Constipation in Mixed Hemorrhoids

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Abstract: *Postoperative constipation is a common complication following mixed hemorrhoid surgery, significantly impacting patients' quality of life and recovery. Traditional Chinese Medicine (TCM), with its unique theoretical system and treatment modalities, has demonstrated significant advantages and clinical efficacy in addressing this issue. This review aims to summarize recent research advances in TCM for treating postoperative constipation in mixed hemorrhoids, encompassing the clinical application and mechanisms of various therapies including oral herbal medicine, external treatments, acupuncture, and massage. Through analysis and synthesis of relevant literature, this article seeks to provide scientific evidence and references for clinical practice, promoting the development and application of more effective therapeutic strategies.*

Keywords: Traditional Chinese Medicine, Mixed Hemorrhoids, Postoperative Constipation, Clinical Research, Therapeutic Advances.

1. Introduction

Postoperative constipation following mixed hemorrhoid surgery is a common complication associated with multiple factors, including surgical trauma, use of anesthetic agents, postoperative pain, and the patient's psychological state. These factors may lead to gastrointestinal dysfunction, thereby causing constipation. Recent studies indicate that TCM demonstrates significant efficacy in treating postoperative constipation in mixed hemorrhoids. TCM emphasizes syndrome differentiation and holistic regulation, effectively alleviating constipation symptoms and promoting postoperative recovery by regulating visceral function and promoting the flow of qi.

2. Etiology and Pathogenesis of Postoperative Constipation in Mixed Hemorrhoids

2.1 TCM Perspective on Postoperative Constipation in Mixed Hemorrhoids

TCM's understanding of postoperative constipation in mixed hemorrhoids stems from a profound comprehension of the body's qi, blood, visceral function, and their interrelationships. TCM posits that constipation is closely related to qi-blood deficiency, qi stagnation and blood stasis, and downward diffusion of damp-heat, among other factors. Following mixed hemorrhoid surgery, patients often experience depletion of qi and blood, leading to a loss of intestinal lubrication and subsequent constipation. Surgical trauma not only damages qi and blood but may also cause qi stagnation and blood stasis, impairing intestinal transmission and exacerbating constipation symptoms. TCM treatment emphasizes syndrome differentiation. Practitioners determine whether the patient exhibits qi-blood deficiency, qi stagnation and blood stasis, or downward diffusion of damp-heat based on specific symptoms, tongue, and pulse characteristics, and apply different treatments accordingly. For instance, patients with qi-blood deficiency are often treated with qi-tonifying

and blood-nourishing herbs; those with qi stagnation and blood stasis may receive blood-activating and stasis-resolving herbs; and patients with downward diffusion of damp-heat require heat-clearing and dampness-draining formulas.

2.2 Modern Medical Perspective on Postoperative Constipation in Mixed Hemorrhoids

The occurrence of constipation after mixed hemorrhoid surgery is a common and complex issue, extensively studied in modern medicine. Postoperative pain is a significant contributing factor. Pain not only affects daily life but also instills fear of defecation, inhibiting the urge to defecate and increasing constipation risk. Furthermore, the use of anesthetic agents is a significant factor. While essential during surgery, anesthetics can inhibit intestinal peristalsis, contributing to constipation [1]. Postoperative bed rest is another major cause, reducing physical activity and mechanical stimulation of the intestines, thereby impairing peristalsis. Due to pain and discomfort, patients often reduce food intake, leading to insufficient dietary bulk and further compromising bowel function. Research indicates that postoperative inflammatory responses and local edema may also exacerbate constipation. Surgical tissue damage triggers local inflammation, impairing intestinal function, while edema can compress the bowel, hindering peristalsis and defecation [2]. Modern medicine increasingly recognizes the role of psychological and social factors and focuses on non-pharmacological interventions like physical therapy and psychological support to alleviate constipation symptoms.

3. TCM Treatment of Postoperative Constipation in Mixed Hemorrhoids

3.1 Oral Herbal Medicine

3.1.1 Application of Classical Formulas

Classical formulas play a vital role in TCM treatment.

Formulas like Maziren Pill (Hemp Seed Pill), Runchang Pill (Intestine-Moistening Pill), and Buzhong Yiqi Decoction (Spleen-Strengthening and Qi-Boosting Decoction) are widely used due to their significant efficacy. Maziren Pill, known for its laxative effect, contains ingredients like hemp seed, almond, and peach kernel, effectively relieving constipation and improving quality of life [3]. Studies show it regulates gut microbiota, enhances peristalsis, and improves bowel habits. Runchang Pill demonstrates good clinical efficacy, primarily moistening dryness and promoting bowel movement, especially suitable for constipation due to yin or blood deficiency. It alleviates postoperative discomfort and aids intestinal recovery [4]. Modern research confirms its effectiveness in improving intestinal function by regulating water balance and stimulating peristalsis. Buzhong Yiqi Decoction treats constipation due to qi deficiency. In postoperative recovery, it enhances spleen and stomach function, improves overall qi and blood circulation, and alleviates constipation [5]. Its components (e.g., Astragalus, Atractylodes, Angelica) are shown to improve appetite and intestinal function, making this holistic approach widely recognized, especially postoperatively.

3.1.2 Research on Modern Herbal Compounds

Research on modern herbal compounds for postoperative constipation has gained attention. Development integrates TCM theory with modern science, particularly network pharmacology, analyzing interactions between components to reveal mechanisms. For example, certain herbs alleviate constipation by modulating gut microbiota and promoting peristalsis. Compounds like Tongbian Heji (Laxative Mixture) and Runchang Tongbian Granules (Intestine-Moistening and Laxative Granules) show good efficacy in clinical trials [6-7]. Tongbian Heji acts through multiple mechanisms to improve bowel function and promote defecation. Runchang Tongbian Granules significantly improve symptoms and quality of life while reducing drug dependence in postoperative patients [7].

3.2 External TCM Treatments

3.2.1 Herbal Fumigation and Washing

Herbal fumigation and washing, a traditional external method, shows unique efficacy in relieving postoperative constipation. It employs herbs with heat-clearing, detoxifying, blood-activating, and stasis-resolving properties applied via steam to the anal region, reducing local edema and promoting defecation. Studies show it improves local blood circulation and intestinal peristalsis, reducing constipation incidence [8]. Research combining fumigation with other therapies found significant symptom improvement compared to other methods alone. Herbs like *Scutellaria baicalensis* (Huang Qin) and *Forsythia suspensa* (Lian Qiao) clear heat and detoxify, reducing anal inflammation and edema. The warm steam relaxes the anal sphincter, easing defecation pain [8, 9]. Treatment frequency and duration should be individualized. Continuous fumigation significantly improves defecation frequency and quality, especially in complex cases, reducing discomfort and promoting recovery [9]. Thus, it is a valuable adjunct therapy.

3.2.2 Herbal Enema

Herbal enema, a traditional TCM therapy, has gained traction for constipation. Rectal administration allows rapid, direct action on the affected area. Common enema solutions include Rheum palmatum (Da Huang) and Mirabilite (Mang Xiao), both effective laxatives. Rhubarb has potent purgative effects. Its components stimulate peristalsis and increase intestinal fluid secretion, promoting defecation [10]. Clinical studies show it significantly improves defecation frequency and quality with relatively few side effects. Mirabilite increases intestinal water content, softening stool and promoting defecation, particularly effective for elderly and postoperative patients [11]. Herbal enema requires individualization to avoid side effects. Clinicians must understand indications, contraindications, and procedures to ensure safety and efficacy [12-13].

3.3 Acupuncture Therapy

3.3.1 Body Acupuncture

Body acupuncture shows good clinical efficacy for constipation. Stimulating specific acupoints like Tianshu (ST25), Zusanli (ST36), and Dachangshu (BL25) regulates intestinal function and promotes defecation. ST25, located on the abdomen, directly influences intestinal peristalsis and defecation. Needling ST25 enhances peristalsis, improving defecation frequency and quality [14]. ST36, a key point for strengthening the body and regulating digestion, promotes gastrointestinal motility via neurological regulation [15]. BL25 corresponds to the large intestine; needling it improves colonic function and stool expulsion [16]. Acupuncture works not just mechanically but by regulating nerves and endocrine functions, such as increasing serotonin (5-HT) secretion to enhance peristalsis [15], providing a scientific basis for its use.

3.3.2 Auricular Acupressure

Auricular acupressure stimulates specific ear points to regulate physiological functions, gaining attention for constipation treatment. Based on neural reflexes between the ear and body, stimulating points like Large Intestine, Rectum, and Sympathetic Nerve regulates peristalsis and improves symptoms. It influences bowel activity via the autonomic nervous system. Clinical studies show it increases peristalsis speed and improves defecation frequency and quality. Auricular acupressure significantly alleviates postoperative constipation and improves bowel habits [17]. It is a suitable non-pharmacological option. Studies indicate it not only relieves constipation but also improves quality of life and reduces anxiety and depression, offering a promising adjunct therapy.

3.4 Massage Therapy

3.4.1 Abdominal Massage

Abdominal massage, a traditional TCM technique, is increasingly used for constipation. Clockwise abdominal massage effectively promotes peristalsis and improves digestion [18-19]. Systematic reviews confirm it significantly increases defecation frequency, improves stool consistency, and reduces symptoms, making it an effective

non-pharmacological intervention for functional constipation. Abdominal massage also benefits overall health, improving physical and mental well-being and reducing anxiety and depression [18]. From a TCM perspective, it regulates the spleen and stomach, promotes qi and blood circulation, and enhances self-repair. It shows particular promise for the elderly, significantly reducing constipation and improving their quality of life [20-21].

3.4.2 Acupoint Massage

Acupoint massage is important for treating constipation, especially postoperatively. Massaging points like Tianshu (ST25) and Guanyuan (CV4) regulates qi and blood, promoting intestinal function. ST25 regulates the intestines; CV4 warms yang and regulates viscera, effective for constipation due to cold-dampness. Combining acupoint massage with other TCM methods like acupoint application enhances efficacy. A study on psychogenic drug-induced constipation found combined therapy superior to either method alone in improving defecation characteristics, difficulty scores, and quality of life [22].

3.5 Integrated Traditional Chinese and Western Medicine Therapy

3.5.1 Combination of Chinese and Western Medicine

Combining TCM and Western medicine shows significant clinical efficacy for various conditions, including postoperative constipation. Studies indicate that combining TCM with laxatives or prokinetics improves efficacy while reducing side effects [23-24]. TCM offers unique advantages, such as modulating gut microbiota to promote peristalsis, complementing Western laxatives which often cause diarrhea or abdominal pain. Herbs like Rhubarb (Da Huang) and Bitter Orange (Zhi Shi) stimulate peristalsis and fluid secretion. When combined with Western laxatives, they enhance effects while mitigating side effects [24]. Modern pharmacology supports this synergy; TCM components may regulate neurotransmitters and endocrine factors affecting bowel function [25].

3.5.2 Comprehensive Treatment Plans

TCM emphasizes individualized and comprehensive plans for postoperative constipation. Integrating herbs, acupuncture, massage, etc., effectively improves symptoms and quality of life. Comprehensive therapy regulates intestinal function and enhances overall health [26]. Tailored plans should include appropriate herbal formulas, acupuncture, massage, and lifestyle modifications like increased dietary fiber and adequate hydration.

4. The Mechanisms of TCM Treatment

4.1 Regulation of Gut Microbiota

Gut microbiota plays a crucial role in digestive health. Imbalance is linked to constipation. TCM shows potential in alleviating constipation by modulating gut microbiota. Systematic reviews highlight TCM's significant role in regulating microbiota, particularly for gut-related disorders.

TCM can alter microbial composition and influence short-chain fatty acid (SCFA) production, vital for intestinal function [27-28]. Certain TCM components increase beneficial bacteria (e.g., *Lactobacillus*, *Bifidobacterium*), promoting peristalsis and water absorption [29]. Studies in constipated mice show TCM extracts restore microbial balance and metabolic function [30, 31]. Microbiota modulation also affects host neurotransmitters like serotonin (5-HT), crucial for intestinal motility, involving both direct microbial effects and metabolite regulation [32-33]. Specific formulas increase 5-HT synthesis, improving motility [34-35].

4.2 Promotion of Intestinal Peristalsis

TCM active components like emodin and sennosides stimulate intestinal nerves and smooth muscle contraction, promoting peristalsis. Dalitong Granules (DLT) significantly improve intestinal motility in functional dyspepsia (FD) patients [36]. DLT components modulate gut microbiota to improve motility, validated in animal models. Shenhua Plaster (SHP) effectively promotes postoperative intestinal motility and recovery, linked to microbiota modulation [37]. In FD patients, combining Fructus Aurantii (FA) and Tartary Buckwheat Bran (TBB) enhances motility, increasing fecal SCFAs and beneficial bacteria abundance [38]. Other components like *Cistanche deserticola* polysaccharides (CDPS) relieve constipation by regulating the intestinal barrier and microbiota.

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5. Summary and Perspectives

Postoperative constipation in mixed hemorrhoids is a common complication significantly impacting quality of life. TCM has gained attention in this field, demonstrating significant clinical efficacy in improving symptoms and regulating intestinal function. Analysis of oral herbs, external treatments, acupuncture, and massage reveals TCM's unique advantages. However, despite promising results, current research has limitations. Firstly, in-depth studies on TCM mechanisms are insufficient, requiring modern medical validation. Secondly, the quantity and quality of clinical research need improvement to provide robust evidence-based support. Future research should focus on: 1) Elucidating TCM's specific mechanisms for regulating intestinal function, particularly its impact on gut microecology; 2) Optimizing treatment protocols by integrating modern medical research to develop more effective TCM strategies; 3) Strengthening the design of randomized controlled trials to enhance scientific rigor and reliability. When comparing TCM and Western medicine approaches, they are not mutually exclusive but complementary. Western medicine excels in acute symptom relief, while TCM shows unique potential for long-term regulation and individualized treatment. Therefore, integrating their strengths into a comprehensive therapeutic approach may be optimal for future management.

In conclusion, TCM shows great promise for treating postoperative constipation in mixed hemorrhoids. However, widespread clinical application requires systematic research to validate efficacy and mechanisms. Actively promoting the integration of TCM and modern medicine will provide patients with more comprehensive and effective treatment options, ultimately improving their quality of life.

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