

Clinical Observation of Chinese Medicinal Prescriptions for Swelling and Pain in The Postoperative Treatment of Mixed Hemorrhoids

Yuru Duan*, Guangliang Xu, Lei Ge, Wei Zhang, Xu Zhang, Yi Yang

Hospital of Traditional Chinese Medicine of Qiqihar, Qiqihar 161005, Heilongjiang Province, China

*Corresponding author: Yuru Duan, puluowangsi2024@163.com

Copyright: © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: *Objective:* To observe the clinical effect of traditional Chinese medicine (TCM) on reducing swelling and pain in patients with mixed hemorrhoids. *Methods:* Sixty patients with mixed hemorrhoids who were admitted to the Hospital of Traditional Chinese Medicine of Qiqihar from January 2023 to January 2024 were selected and divided into two groups. The treatment group ($n = 30$) was treated with mixed hemorrhoid ligation combined with traditional Chinese swelling and pain medicine, and the control group ($n = 30$) was only treated with mixed hemorrhoid ligation. The pain level, edema score, and prognosis of the two groups after the intervention were analyzed. The clinical efficacy was used as the evaluation criterion to compare the clinical effects of different treatment options. *Results:* After the treatment, the pain score, edema score, and prognostic wound score of the treatment group were all lower than those of the control group ($P < 0.05$). The total clinical effectiveness of the treatment group (100%) was higher than that of the control group (76.67%), ($\chi^2 = 4.2857, P < 0.05$). *Conclusion:* The application of traditional Chinese swelling and pain medicine in treating patients with mixed hemorrhoids effectively reduced the patient's pain, reduced the degree of wound edema, promoted wound healing, and improved the patient's prognosis. The curative effect was significant and had a positive impact.

Keywords: Chinese herbal prescriptions for reducing swelling and pain; Mixed hemorrhoids; Postoperative treatment

Online publication: March 24, 2024

1. Introduction

Hemorrhoids are a common anorectal disease, with mixed hemorrhoids being one of the more severe pathological types. Clinical manifestations of hemorrhoids include pain, bleeding, prolapse, etc., which seriously affect the physical and mental health of the patients. Currently, clinical treatment for patients with mixed hemorrhoids mainly relies on surgical treatment, among which the Ruiyun procedure for hemorrhoids (RPH) is the most commonly used surgical method, which can effectively eliminate lesions and control the disease. However, during the postoperative recovery process, due to factors such as the re-opening of wounds and the patient's daily defecation, it can easily lead to adverse reactions such as delayed wound healing and anal swelling, which is not conducive to the patient's postoperative recovery. Based on the concept of traditional

Chinese medicine (TCM), the main treatment principles for hemorrhoids include “activating blood circulation and removing blood stasis,” “clearing heat and drying dampness,” and “reducing swelling and relieving pain.” Our hospital combines the actual conditions of patients with mixed hemorrhoids, based on the theory of TCM, to design TCM prescriptions for reducing swelling and pain, fully utilizing the respective advantages of traditional Chinese and Western medicine to reduce postoperative pain, edema, and promote postoperative wound healing ^[1]. In this study, 60 patients with mixed hemorrhoids were selected as subjects. A treatment plan for reducing swelling and pain in hemorrhoid patients based on TCM was designed and implemented, and the results were analyzed.

2. Materials and methods

2.1. General information

The study was conducted in the form of a retrospective analysis. Sixty patients with mixed hemorrhoids who were admitted to our hospital between January 2023 and January 2024 were selected as observation subjects and divided into two groups, with 30 patients in each group. The treatment group consisted of 19 males and 11 females aged 24–58 years old, with an average age of 36.19 ± 6.38 years. The Body Mass Index (BMI) ranged from 18.54–25.37 kg/m², with an average of 22.17 ± 1.52 kg/m². The course of the disease ranged from 1–6 years, with an average duration of 2.64 ± 0.88 years. The control group consisted of 20 males and 10 females aged 24–58 years old, with an average of 36.35 ± 6.54 years. The BMI ranged from 18.35–25.64 kg/m², with an average of 22.23 ± 1.61 kg/m². The course of the disease ranged from 1–6 years, with an average of 2.69 ± 0.84 years. The data of the two groups were comparable but were not statistically significant ($P > 0.05$).

2.2. Inclusion and exclusion criteria

Inclusion criteria: (1) Patients with complete clinical data records; (2) patients diagnosed with mixed hemorrhoids based on literature standards ^[2]; (3) patients who meet the surgical indications for complete mixed hemorrhoid ligation; (4) complied and consented.

Exclusion criteria: (1) Patients with other anorectal diseases, such as perianal abscess, eczema, anal fistula, etc.; (2) presence of allergies or contraindications to the drugs involved in the study; (3) cognitive impairment; (4) patients who are unable to complete the study due to other reasons.

2.3. Method

The control group was treated with mixed hemorrhoid RPH. Preoperative preparations were performed, including the preoperative examination of blood, urine, liver function, and the levels of four coagulation items, namely hepatitis B and C series, syphilis, and human immunodeficiency virus (HIV). Other examinations like chest X-rays and electrocardiograms were also performed. The elimination of surgical contraindications was carried out through routine perianal skin preparation, preoperative cleansing enema with warm soapy water, and retrograde intestinal preparation, including fasting of water for 6 hours before surgery. For the surgical procedure, spinal anesthesia was performed with hybrid hemorrhoid RPH. For the postoperative treatment, Kangfuxin Liquid, Longzhu Ointment, and Vaseline gauze strips were used for routine dressing changes, and patients were instructed to follow a regular diet the first day after surgery. Patients were forbidden to eat spicy food and their anus was kept clean. On the first day after surgery, a potassium permanganate sitz bath (1:5000) was also given for 15 minutes each time, twice a day, for 2 weeks.

Based on the control group, the treatment group was treated with a combination of TCM prescriptions for reducing swelling and pain after surgery. On the first day after surgery, the TCM prescription for reducing

swelling and analgesics was used for the sitz. The prescription was composed of *Scutellaria baicalensis Georgi* (15 g), amur cork tree (15 g), *Coptidis Rhizoma* (15 g), purslane herbs (30 g), *Angelica dahurica* (15 g), Glauber's salt (10 g) (solution), *Kochiae Fructus* (15 g), *Rhizoma Corydalis* (10 g), all of which was boiled in 400 mL water. Patients were given the sitz bath for 15 minutes each time, twice a day, for 2 weeks.

2.4. Observation indicators

The pain levels of the patients 1 day and 14 days after surgery were assessed at 4 levels (0–10 points). The score is based on the patient's primary complaint, facial expression, and symptom observation. A score of 0 means no pain, a score of 1–3 indicates mild pain (Grade 1), a score of 4–6 indicates moderate pain (Grade 2), and a score of 7–10 indicates severe pain (Grade 3). The edema score was evaluated at the same time as the pain level and scored according to the actual degree of edema in the surgical wound^[3]. The response is based on 0–4 points, with 0 points indicating no edema on the wound surface. A score of 1 indicates that the wound edema is limited to one location, and the edematous tissue is ≤ 1 cm. A score of 2 indicates ≥ 1 edema, but the symptoms are mild, and the edema tissue is > 1 cm and ≤ 2 cm. A score of 3 indicates ≥ 1 edema, with severe symptoms, and the edema tissue is > 2 cm. The prognosis of the patient was also evaluated based on the patient's surgical wound healing status and judged from 0–3 points^[4]. Zero points indicate no redness, swelling, or oozing from the wound, and the wound is completely healed. A score of 1 indicates that the wound is presented with mild redness or no redness and swelling, less oozing, and the wound is mostly healed. A score of 2 indicates that the wound is slightly red and swollen, there is obvious oozing, the anus feels wet, and the wound is partially healed. A score of 3 indicates that the wound is red, swollen, or oozing, and the wound is not healed. After the treatment, the patient was re-examined, and the clinical efficacy of the treatment was evaluated based on the re-examination results, which were divided into 4 intervals^[5]. If the clinical symptoms disappear, the efficacy index was said to be $\geq 95\%$, and the clinical efficacy was judged as "recovered." If the clinical symptoms significantly improved, the efficacy index was said to be $\geq 75\%$ and $< 95\%$ and the clinical efficacy was judged as "markedly effective." If the clinical symptoms improved, the efficacy index was said to be $\geq 30\%$ and $< 75\%$, %, and the clinical efficacy was judged as "effective." If there is no significant improvement in clinical symptoms, the efficacy index was said to be $< 30\%$ and the clinical efficacy was judged as "ineffective." The total efficacy = recovered + markedly effective + effective. Note: The efficacy index = (pre-treatment points - total points after treatment)/total points before treatment $\times 100.00\%$.

2.5. Statistical analysis

Statistical analysis was performed using the SPSS 22.0 software. The measurement data were expressed as mean \pm standard deviation and analyzed using the *t*-test. Count data were expressed as % and analyzed using the chi-squared (χ^2) test. Results were considered statistically significant at $P < 0.05$.

3. Results

3.1. Comparison of pain level

As shown in **Table 1**, After treatment, the pain level in the treatment group was lower than that of the control group ($P < 0.05$).

Table 1. Measurement of pain level between the two groups after surgery (mean \pm standard deviation, points)

| Group | Cases, <i>n</i> | Pain level | | <i>t</i> | <i>P</i> |
|-----------------|-----------------|---------------------|-----------------------|----------|----------|
| | | 1 day after surgery | 14 days after surgery | | |
| Treatment group | 30 | 5.80 \pm 0.74 | 0.84 \pm 0.29 | 34.1811 | 0.0000 |
| Control group | 30 | 5.82 \pm 0.75 | 1.04 \pm 0.35 | 31.6332 | 0.0000 |
| <i>t</i> | - | 0.1039 | 2.4100 | - | - |
| <i>P</i> | - | 0.9176 | 0.0191 | - | - |

3.2. Comparison of edema score

As shown in **Table 2**, after treatment, the edema score of the treatment group was lower than that of the control group ($P < 0.05$).

Table 2. Comparison of edema scores between the two groups after surgery (mean \pm standard deviation, points)

| Group | Cases, <i>n</i> | Edema | | <i>t</i> | <i>P</i> |
|-----------------|-----------------|---------------------|-----------------------|----------|----------|
| | | 1 day after surgery | 14 days after surgery | | |
| Treatment group | 30 | 2.31 \pm 0.52 | 0.54 \pm 0.18 | 17.6179 | 0.0000 |
| Control group | 30 | 2.33 \pm 0.54 | 0.86 \pm 0.23 | 13.7177 | 0.0000 |
| <i>t</i> | - | 0.1461 | 6.0011 | - | - |
| <i>P</i> | - | 0.8843 | 0.0000 | - | - |

3.3. Comparison of prognosis wound score

As shown in **Table 3**, the prognosis wound score of the treatment group was lower than that of the control group ($P < 0.05$).

Table 3. Comparison of prognosis wound score between the two groups after surgery (mean \pm standard deviation, points)

| Group | Cases, <i>n</i> | Prognosis | | <i>t</i> | <i>P</i> |
|-----------------|-----------------|---------------------|-----------------------|----------|----------|
| | | 1 day after surgery | 14 days after surgery | | |
| Treatment group | 30 | 2.14 \pm 0.43 | 0.34 \pm 0.14 | 21.8015 | 0.0000 |
| Control group | 30 | 2.16 \pm 0.46 | 0.56 \pm 0.18 | 17.7413 | 0.0000 |
| <i>t</i> | - | 0.1739 | 5.2842 | - | - |
| <i>P</i> | - | 0.8625 | 0.0000 | - | - |

3.4. Comparison of clinical efficacy

As shown in **Table 4**, the total effectiveness of the clinical treatment of the treatment group was higher than that of the control group ($P < 0.05$).

Table 4. Evaluation of clinical efficacy between the two groups [n (%)]

| Group | Cases, n | Recovered | Markedly effective | Effective | Ineffective | Total effective rate |
|-----------------|----------|------------|--------------------|-----------|-------------|----------------------|
| Treatment group | 30 | 16 (53.33) | 13 (43.33) | 1 (3.33) | 0 | 30 (100.00) |
| Control group | 30 | 12 (40.00) | 10 (33.33) | 4 (13.33) | 4 (13.33) | 26 (76.67) |
| χ^2 | - | - | - | - | - | 4.2857 |
| <i>P</i> | - | - | - | - | - | 0.0384 |

4. Discussion

In clinical practice, mixed hemorrhoids are a common and frequently occurring disease. Symptoms include blood in the stool, edema, perianal pain, etc., which seriously affect the physical and mental health of patients. Early clinical treatment mainly relied on conservative treatment. When conservative treatment fails to achieve ideal results, patients generally choose surgical treatment. Currently, in clinical practice, mixed hemorrhoid RPH is the primary treatment technique for mixed hemorrhoids, which can effectively remove lesions and alleviate the impact of the disease. However, in long-term clinical treatment, it has been found that mixed hemorrhoid RPH may cause large wounds, where patients commonly suffer from perianal pain, edema, and other problems after surgery. This can lead to wound infection and affect the outcome of surgical treatment and the patient's prognosis [6]. Therefore, treatment for hemorrhoids should focus on minimizing pain, promoting wound healing, and improving patient prognosis based on the patient's actual situation.

Due to the large number of nerve endings in the anus, surgical operations may result in mechanical damage. Postoperative pain stimulation may cause sphincter spasms, causing a backlog of local blood vessels and lymphatic vessels and the blockage of blood and lymph fluid. Tissue reflux can easily cause symptoms such as perianal edema [7]. Based on the theory of TCM, a surgical operation is a process that "injures qi and consumes blood." After mixed hemorrhoid surgery, the skin around the patient's wound is damaged, which in turn causes a deficiency of qi and blood, spasm, and blood stasis. Therefore, postoperative treatment must focus on "clearing heat and reducing dampness" and "replenishing qi and nourishing blood."

In this study, a TCM-based prescription for reducing swelling and pain was formulated as the treatment plan. *Scutellaria baicalensis Georgi*, amur cork tree bark, *Coptidis Rhizoma*, purslane herbs, *Angelica dahurica*, and other medicinal materials were used as ingredients in the main prescription. Among them, *Scutellaria baicalensis Georgi* has the effects of clearing away heat, drying dampness, and detoxifying. Amur cork tree bark has the effect of purging heat, removing steam, detoxifying, and treating sores. *Coptidis Rhizoma* can remove heat and dampness, and detoxify. Purslane herbs have cooling effects, stop bleeding, remove heat, and prevent dysentery. *Angelica dahurica* relieves the affected surface, disperses cold, dispels wind, and relieves pain. When various medicinal ingredients are used together, they can clear away heat, detoxify, reduce swelling, unblock meridians, dispel wind, relieve the affected surface, etc. This effectively reduces the patient's pain, eliminates symptoms of edema, and promotes the patient's postoperative recovery [8].

After formulating a TCM-based prescription for reducing swelling and pain in hemorrhoid patients, the treatment was carried out through a sitz bath so that the medicinal materials in the prescription could be used to continuously fumigate the surgical site in the form of hot steam and directly act on the lesion area to enhance the efficacy of the medicinal ingredients. This effectively promotes local blood circulation, prevents postoperative infection, improves blood circulation, removes blood stasis, dredges meridians, eliminates edema, suppresses postoperative pain, and promotes wound healing and recovery [9]. Moreover, the use of Chinese

medicinal medicinal materials is ideal as the ingredients are natural and easily obtained. They are safe to use, have no severe adverse reactions, are cheap, and have high patient acceptance^[10].

5. Conclusion

The design and implementation of a treatment plan using Chinese herbal prescriptions for reducing swelling and pain in patients with mixed hemorrhoids effectively reduced the patient's pain, promoted the subsidence of local edema, and accelerated the healing of local wounds. The curative effect was significant. This treatment is worthy of popularization.

Funding

Innovation Incentive Project: Science and Technology Innovation Incentive Project of Qiqihar City, Heilongjiang Province (No. CSFGG-2023210)

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Liang J, Ru X, Su J, et al., 2021, Effect of Chuyu Decoction Combined with Xiaozhong Zhitong Recipe on Postoperative Recovery of Annular Mixed Hemorrhoids. *Chinese Journal of Integrated Traditional Chinese and Western Medicine Surgery*, 2021, 27(6): 881–886.
- [2] Colorectal and Anal Disease Professional Committee of the Chinese Society of Integrated Traditional Chinese and Western Medicine, 2020, Guidelines for Diagnosis and Treatment of Hemorrhoids in China. *Colorectal and Anal Surgery*, 26(5): 519–533.
- [3] Han Q, 2019, Clinical Observation on The Treatment of Edema and Pain After Mixed Hemorrhoid Surgery with Xiaozhongzhitong Prescription, Fumigation, and Sitz Bath Combined with Diosmin Tablets. *Chinese Folk Therapies*, 27(24): 50–52.
- [4] Jiang R, 2018, Effect of Oral Administration of Chuyu Decoction Combined with Xiaozhuangzhitong Prescription, Fumigation, and Sitz Bath on Postoperative Recovery of Mixed Hemorrhoids. *Jilin Traditional Chinese Medicine*, 38(9): 1053–1056.
- [5] Zhang B, Ding Y, Chen Z, 2019, Analysis of the Clinical Effect of Traditional Chinese Medicine Fumigation and Sitz Bath for Reducing Swelling and Relieving Pain, Clearing Heat, Removing Dampness, and Relieving Itching after Mixed Hemorrhoid Surgery. *Xinjiang Traditional Chinese Medicine*, 37(3): 29–31.
- [6] You Z, Chen J, Wang S, 2019, Clinical Observation on The Treatment of Wound Edema after Mixed Hemorrhoids Using A Photon Therapy Device Combined with Xiaozhuangzhitong Decoction, Fumigation, and Sitz Bath. *Guangming Traditional Chinese Medicine*, 34(20): 3067–3069.
- [7] Zheng W, Wang Y, Tao C, 2017, Evaluation of the Effect of Xiaozhongzhitong Decoction, Fumigation, and Sitz Bath in Treating Edema and Pain after Mixed Hemorrhoid Surgery. *Chinese and Foreign Medical Research*, 15(14): 118–120.
- [8] Wu H, Mei Y, Hu T, 2021, Clinical Observation of Fuzheng Zhitong Xiaozhong Recipe Combined with Diosmin Tablets in The Treatment of Perianal Swelling and Pain After Mixed Hemorrhoid Surgery. *China Traditional Chinese*

Medicine Science and Technology, 28(4): 656–658.

- [9] Luo C, Hu Z, Yang X, et al., 2022, Observation on the Efficacy of Sitz Bath with Lianzhi Alum Solution Combined with Xiaozhuangzhitong Decoction in Postoperative Hemorrhoid Surgery. *Sichuan Traditional Chinese Medicine*, 40(8): 104–106.
- [10] Chu Z, Zhou A, Mao L, 2021, Effect of Traditional Chinese Medicine Fumigation and Sitz Bath Combined with Detumescence and Analgesic Ointment and Dressing Change on Wound Healing after Mixed Hemorrhoid Surgery. *Chinese Journal of Anorectal Diseases*, 41(8): 45–47.

Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.