

Observations on the efficacy of Surgical Treatment of mixed Hemorrhoids using the “Jiang Style Improvement” Procedure

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Abstract

Objective: This study aims to explore the clinical efficacy of the "Jiang Style Improvement" surgical approach in treating mixed hemorrhoids. **Methods:** A total of 120 patients with mixed hemorrhoids requiring surgical intervention were admitted to the Department of Anus and Intestines at Wuhu Hospital of Traditional Chinese Medicine between January 2023 and June 2023. Participants were randomly assigned to either the study group or the control group using simple random allocation, with 60 cases in each group. The study group underwent the "Jiang Style Improvement" surgical procedure, while the control group received the traditional surgical treatment of external stripping and internal ligation. The outcomes measured included wound healing time, postoperative pain, edema, and anal stenosis in both groups.

Results: Both the study group and the control group achieved effective cure rates, with a statistically significant difference in wound healing time ($P < 0.01$); the control group exhibited a slower healing time compared to the study group. Additionally, the differences in postoperative pain, edema, anal stenosis, and recurrence rates between the two groups were statistically significant ($P < 0.05$), indicating that the clinical efficacy of the control group was inferior to that of the study group.

Conclusion: The "Jiang Style Improvement" surgical approach demonstrates favorable clinical efficacy, effectively reducing recurrence rates, shortening wound healing times, conserving medical resources, and alleviating postoperative pain and edema while preventing anal stenosis. Therefore, it is recommended for broader adoption.

Keywords: “jiang style improvement” surgical approach; traditional external stripping and internal ligation; mixed hemorrhoids

1. Introduction

The 'Jiang Style Improvement' technique enhances the traditional methods of external peeling and internal ligation, drawing from numerous clinical cases and the extensive surgical experience of Jiang Kai, the director of the Department of Anus and Intestines at Wuhu Hospital of Traditional Chinese Medicine. This innovative approach has been clinically applied to over 3,000 patients, demonstrating accurate and safe efficacy. It significantly reduces recurrence rates, alleviates postoperative pain, prevents postoperative edema, and effectively mitigates the risk of anal stenosis without incontinence. Additionally, it promotes rapid wound healing and normal anal function. The present study encompasses 120 cases of patients with mixed hemorrhoids requiring surgical intervention, admitted to our department between January 2023 and June 2023. The results are summarized and reported as follows.

2. Data and Methods

2.1 Clinical Information

The study population comprised 120 cases of mixed hemorrhoids requiring surgical intervention, admitted to the Department of Anus and Intestines at Wuhu Hospital of Traditional Chinese Medicine between January 2023 and June 2023. These cases were randomly and evenly divided into two groups: the study group and the control group. Patients in the study group underwent the "Jiang Style Improvement" surgical procedure, which includes external stripping and internal ligation, while those in the control group received the traditional surgical procedure of external stripping and internal ligation. The study group consisted of 60

patients, including 34 males and 26 females, aged 19 to 66 years, with a mean age of (43.30±12.21) years. The duration of the disease among these patients ranged from 1 to 10 years, with a mean duration of (4.43±1.92) years. In the control group, there were also 60 patients, comprising 29 males and 31 females, aged 20 to 64 years, with a mean age of (42.93±11.31) years. The duration of the disease in the control group varied from 1 to 8 years, with a mean duration of (3.83±1.75) years. The data for both groups were comparable, and none of the differences were statistically significant ($P>0.05$).

Inclusion criteria: using meet the clinical diagnostic criteria of mixed hemorrhoids¹, understand and voluntarily participate in this project. Exclusion criteria: accompanied by other diseases of the anus and intestines, previous diabetes mellitus, hypertension, coagulation abnormalities and other inoperable, mental illness can not cooperate with the patient.

2.2 Treatment

The study group opted for the "Jiang-style improved" operation. All subjects were placed under lumbar-rigid anesthesia, and the procedure was performed by Dr. Jiang, the deputy chief physician of our department, utilizing the "Jiang-style improved" external stripping and internal ligation technique. The surgical procedure commenced after achieving the effects of lumbar anesthesia, with the patient is in the lithotomy position and routinely disinfected and draped. The mixed hemorrhoids were fully exposed, beginning with an incision along the posterior midline (with adjustments made based on the patient's specific condition to excise a portion of the internal sphincter). The first excision involved the left hemorrhoid nucleus at the 6 o'clock position, preserving a small amount of skin on the right side. The second excision targeted the hemorrhoid nucleus at the 11 o'clock position, followed by the third excision of the right hemorrhoid nucleus at the 6 o'clock position, which retained a small amount of skin on the left side. The fourth excision was performed on the hemorrhoid nucleus at the 9 o'clock position, and the fifth on the hemorrhoid nucleus at the 3 o'clock position. Following these excisions, the entire surgical site was thoroughly inspected, and electrocautery was employed to address any small hemorrhoidal nuclei and ensure complete hemostasis. Throughout the procedure, strict adherence to aseptic principles was maintained, with efforts made to preserve the perianal skin and the skin bridges between incisions. Additionally, ligation points were strategically scattered across different planes, and meticulous inspection of the surgical incisions was conducted to prevent any overlooked bleeding points.

In the control group, traditional external stripping and internal ligation was used, and the preoperative preparation was equivalent to that of the study group. Lift the corresponding position of external hemorrhoids, make a V-shaped incision to 0.5 cm above the dentate line, clamp the bottom of the corresponding position of internal hemorrhoids with hemostatic forceps, and then ligate the base of the internal hemorrhoids with a silk thread, excise the hemorrhoidal stumps, and trim the tissues so as to make the traumatic surface smooth 2.

Postoperative treatment: the two groups of patients with postoperative wound pressure bandage, postoperative resumption of daily dietary habits, postoperative defecation with traditional Chinese medicine "ten flavors of rhubarb powder" anal sitz bath (Wuhu Hospital of Traditional Chinese Medicine in-hospital preparation), postoperative routine intravenous infusion of anti-inflammatory drugs treatment for 3 days,

postoperative drug change 1 time / day, regular re-examination and 1 year outpatient follow-up.

2.3 Observational Indicators and Assessment Criteria

2.3.1 Observations

They were categorized into: wound healing time; pain score at 3 days postoperatively; wound edema score at 7 days postoperatively; and anal stenosis score at 1 month postoperatively; and the patients were followed up for one year to observe the recurrence of the disease within one year after the surgery.

2.3.2 Comparison of efficacy evaluation criteria

(1) Wound healing time, defined as the time required to record the time from the start of treatment on the first postoperative day until the wound is completely healed and a new epithelial layer is formed.

(2) Pain scoring was done using the perianal affected area pain score using VAS

0 points: no pain;

1-3 points: slight pain, but tolerable;

4-6 points: obvious pain, will affect the quality of sleep, still tolerable;

7-10 points: the pain is strong, difficult to bear, seriously affecting the impact of appetite and sleep.

(3) Scoring criteria for edema in the affected perianal area

3 points: swelling >2 cm in diameter, severe bulging of traumatic tissue, shiny skin, loss of skin texture;

2 points: swelling diameter 1-2 cm, trauma moderately bulging, skin texture present but not obvious;

1 point: swelling <1 cm in diameter, slight bulging of the trauma, skin texture present;

0 points: no edema seen.

(4) Anal stenosis is observed according to the following criteria

0 points: no anal stenosis;

1 point: mild stenosis, meaning that the index finger can barely be inserted into the anal canal during anal finger examination;

2 points: moderate stenosis, where the index finger requires force to insert into the anal canal and causes pain;

3 points: severe stenosis, when the little finger requires force to insert the anal canal, or when it cannot be inserted at all.

2.4 Statistical Methods

SPSS 27.00 statistical software was used to analyze the data, and the measurement data were tested by t-test, and the count data were tested by χ^2 test, and expressed as rate (%), and the result of $P<0.05$ was considered as statistically significant difference.

3. Test Results

3.1 Healing Time

Both groups of patients improved, but the healing time of the wound in the study group was significantly shorter than that of the control group,

the healing time of the control group was 22-35 days with a mean of (27.95±2.83) days, while that of the study group was 18-30 days with a mean of (22.95±2.66) days, and the difference was statistically significant (P<0.01), as shown in Table 1.

Groups	Number of Examples	Healing Time (days)
Research Group	60	22.95±2.66
Comparison Group	60	27.95±2.83
T value		-9.96
P value		<0.01

Table 1: Comparison of differences in healing times ($\bar{X} \pm S$)

3.2 Comparison of Various Postoperative Complication Scores

Comparison of patients' scores for wound pain on the 3rd postoperative day, wound edema on the 7th postoperative day, and anal stenosis on the 1st postoperative month, there was a significant difference in the scores

of postoperative complications occurring by using the two surgical modalities, and the differences were statistically significant (P<0.01), and the rate of various complications in the study group was lower than that of the control group, as shown in Table 2.

Groups	Number of Examples	Wound Pain	Wound Edema	Anal Stenosis
Research Group	60	3.97±1.99	0.87±0.65	0.57±0.65
Comparison Group	60	5.43±2.12	1.38±0.78	1.08±0.80
T value		-3.91	-3.93	-3.86
P value		<0.01	<0.01	<0.01

Table 2: Comparison of postoperative complication scores between the two groups ($\bar{X} \pm S$)

3.3 Comparison of Recurrence 1 year after surgery

The 1-year recurrence rate of patients in the study group was significantly lower than that of the control group (P<0.05), as shown in Table 3.

Groups	Number of Examples	Relapse Rate
Research Group	60	0 (0.00)
Comparison Group	60	6 (10.00)
χ^2 value		4.386
P value		0.036

Table 3: Comparison of 1-year postoperative recurrence rates between the two groups n (%)

4. Discussion

Statistics show that hemorrhoids are the most common type of anal and intestinal diseases in China, and the incidence of internal hemorrhoids is the highest, reaching 59.86%; the incidence of external hemorrhoids is 16.1%; and the incidence of mixed hemorrhoids is 24.13%. Hemorrhoids, also known as "hemorrhoids", the main symptoms of bleeding, pain, prolapse and anal swelling, internal hemorrhoids can be divided into four degrees, when it develops to III degree and above is easy to form mixed hemorrhoids. Mixed hemorrhoids, i.e., internal hemorrhoids and the corresponding position of external hemorrhoids at the same time fusion, forming a whole, when the seriousness of the ring hemorrhoid nucleus can be prolapsed.

The modern medical community has a deeper understanding of the pathology and pathogenesis of hemorrhoids, and the doctrine of anal cushion subsidence has gained general acceptance. The common treatment methods for mixed hemorrhoids include drugs, injections, instruments and surgery, etc. When conservative treatment is basically ineffective, surgery is a more recommended treatment option for such patients, and external stripping and internal ligation (MM) is one of the widely used surgical methods for a wide range of hemorrhoid types, which is simple to operate and can effectively get rid of hemorrhoidal

nuclei. MM is a variation on hemorrhoidectomy, which has gradually become a classic procedure with some therapeutic benefits and is considered the gold standard of traditional surgery in the treatment of hemorrhoids. Although this surgery is simple and easy to operate, it has some potential shortcomings: the surgery involves a larger trauma, which increases tissue damage and causes anal pain, which in turn causes anal contraction, leading to poor perianal blood circulation, which in turn leads to edema of the trauma; this surgery is more severe in the destruction of the anal cushion, which leads to slow healing of the wound, and also raises the likelihood of recurrence, which can seriously affect the normal life of the patient. Moreover, this surgical method has a certain degree of destruction of the dentate line, and patients may experience anal incontinence after surgery. In recent years, anorectal scholars have continued to study and optimize the improvement of surgical treatment modalities for mixed hemorrhoids, all of which have their own advantages and limitations and still have significant room for improvement.

According to the above data, both the "Jiang Style Improvement" surgical approach and traditional MM treatment of mixed hemorrhoids can achieve very good efficacy. In the study group, the "Jiang Style Improvement" surgical approach of wound healing time is shorter, which can be seen that the study group has more advantages, the main reason is

that the traditional external stripping and internal ligation using a V-shaped incision, the destruction of the larger, anal canal skin and mucous membrane loss is more, and thus slow healing of wounds; and the “Jiang Style Improvement” surgical approach will retain a small amount of skin on the side of the hemorrhoidal nucleus, to minimize the damage to the perianal skin, and according to the patient-specific circumstances to cut off some of the internal sphincter, by reducing the tension of the internal sphincter, to relieve the contraction and spasm of sphincter. By reducing the tension of the internal sphincter, the contraction and spasm of the sphincter can be relieved and postoperative pain can be reduced, which also helps to promote the reflux of hemorrhoidal veins and lymph, improve blood circulation, and thus help the healing of the wound⁸. Since the trauma healed faster in the study group, the patients' hospitalization time was relatively shorter; in addition, the cost of surgery was the same for both groups, and the rest of the treatments were also the same, which means that the hospitalization cost in the study group was reduced compared to the control group, which could benefit the patients to a greater extent and also help to conserve healthcare resources.

This study also found that the postoperative complication (pain, edema, anal stenosis) scores of both groups were significantly lower than those of the control group ($P < 0.001$), indicating the efficacy of the “Jiang Style Improvement” surgical approach for the treatment of mixed hemorrhoids. The reasons are analyzed as follows: the “Jiang Style Improvement” surgical approach effectively prevents stenosis due to scar contracture by preserving more mucosa and skin, and each ligation point is not in a plane as much as possible to protect the skin bridge between adjacent incisions, so that the scar contraction of the incision is not in the same plane, thus effectively preventing stenosis. The postoperative pain and edema of traditional external stripping and internal ligation is mainly due to the contracture of the internal anal sphincter, and selectively cutting off the internal sphincter can effectively relieve the spasm of the sphincter, thus reducing the patient's pain⁹; and cutting off a part of the internal sphincter also relieves the obstruction of the local blood circulation caused by the spasm, together with the fact that the “Jiang Style Improvement” surgical approach reduces the damage to the soft tissues around the anal verge, which greatly reduces the traumatic edema. The incidence of traumatic edema is greatly reduced.

The traditional external stripping and internal ligation is simple and easy to perform, and is a classic procedure, which is widely welcomed and used by anorectal surgeons, however, the limitation of this procedure is that the maximum number of hemorrhoid cores can only be excised in a single operation is three, and it is not possible to cure mixed hemorrhoids in a single operation, and the recurrence rate is higher, and the patients are more suffered. From the analysis of the above data, it is concluded that the “Jiang Style Improvement” surgical approach greatly reduces the recurrence rate, which adopts the method of staggered excision of hemorrhoidal nuclei according to the sequence of 6-point left side-11-point right side-6-point-9-point-3-point, effectively removing all hemorrhoidal nuclei and reducing the possibility of recurrence.

In summary, the principles that should be followed in treating mixed hemorrhoids are to minimize damage to the anal cushion tissues and anal canal skin and to preserve as much normal tissue as possible¹¹, which

were achieved by the “Jiang Style Improvement” procedure. Compared with the traditional external stripping and internal ligation, the Jiang-type modified procedure not only effectively reduces the recurrence rate, shortens the wound healing time, and saves medical resources, but also shows obvious clinical effects in reducing postoperative pain and edema and preventing anal stenosis, which is worthy of popularization and use.

References

1. Professional Committee of Colorectal and Anal Diseases of the Chinese Society of Integrative Medicine. Chinese hemorrhoid diagnosis and treatment guidelines (2020), *Colorectal and Anal Surgery*, 2020, 26(05):519-533.
2. TANG Kuan-Ni, LAI Li-Xia, WANG Yan-Mei. (2017), Clinical efficacy observation of fractional external peeling and internal ligation for the treatment of severe hemorrhoids. *Journal of China-Japan Friendship Hospital*, 31(02):94-97.
3. LI Chaoyang, NING Yuwen, SHA Jingtao, et al. (2023), Comparative study on clinical efficacy of layered surgery and external peeling and internal ligation for complex mixed hemorrhoids. *Shaanxi Medical Journal*, 52(02):162-165.
4. Su Qi-Ling. (2022), Comparison of the clinical effects of automatic elastic wire hemorrhoid ligation combined with external peeling and internal ligation and anastomotic suprahemorrhoidal mucosal circumcission in the treatment of severe circumferential mixed hemorrhoids. *Jilin Med*, 43(02):346-347.
5. SHEN Binhui, GUO Xutian. (2018), Current status of surgical treatment of circumferential mixed hemorrhoids. *Journal of Liaoning University of Traditional Chinese Medicine*, 20(04):131-133.
6. KANG Junrong, Lv Chenwei. (2024), Clinical study of modified external peeling and internal ligation with traditional Chinese medicine fumigation in the treatment of circumferential mixed hemorrhoids. *Chinese Disaster Relief Medicine*, 11(07):845-847.
7. LI Huatuan, YU Yi, ZHANG Yanbin, et al. (2021), Prospect of clinical application of modified external peeling and internal ligation in the treatment of hemorrhoidal disease. *Journal of Traditional Chinese Medicine*, 30(05):62-64.
8. Li Xiaojia, Guo Xiutian. (2022), Clinical study of modified external peeling and internal ligation in the treatment of circumferential mixed hemorrhoids. *Chinese medicine clinical research*, 14(24):91-93.
9. Li Baoya. (2020), The effect of modified external peeling and internal ligation in the outpatient treatment of patients with mixed hemorrhoids. *Clinical Medicine Research and Practice*, 5(02):83-84.
10. HAN Shaoliang, NI Shichang. (2006), Surgical treatment of colorectal and anal diseases [M]. *Beijing: People's Military Medical Press*, :438.
11. PENG Hui. (2023), Effect of segmental external peeling and internal ligation combined with dermatoplasty in treating 30 cases of circumferential mixed hemorrhoids. *Chinese Journal of Anorectal Diseases*, 43(12):13-15.



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