

Clinical Study on the Combination Therapy of Diosmin Tablets and Mayinglong Musk Hemorrhoids Ointment for Patients with Acute Hemorrhoids

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Abstract: *Objective:* To evaluate the clinical effect of combined therapy with Diosmin Tablets and Mayinglong Musk Hemorrhoids Ointment for patients with acute hemorrhoids. *Methods:* A total of 50 patients with acute hemorrhoids who visited the hospital from January 2023 to January 2025 were selected as samples and randomly divided into two groups. Group A was treated with Diosmin Tablets combined with Mayinglong Musk Hemorrhoids Ointment, while Group B was treated with Mayinglong Musk Hemorrhoids Ointment only. The efficacy, wound recovery time, perianal pain score, hemorrhoid symptom score, and stress indicators were compared between the two groups. *Results:* The efficacy of Group A was higher than that of Group B ($P < 0.05$). The postoperative perianal edema time and wound healing time in Group A were shorter than those in Group B, and the Visual Analog Scale (VAS) score was lower than that in Group B ($P < 0.05$). The hemorrhoid symptom score in Group A was lower than that in Group B ($P < 0.05$). The stress level in Group A was lower than that in Group B ($P < 0.05$). *Conclusion:* The combination therapy of Diosmin Tablets and Mayinglong Musk Hemorrhoids Ointment for postoperative treatment of acute hemorrhoids can effectively relieve perianal pain, shorten the duration of hemorrhoids, and is highly feasible.

Keywords: Acute hemorrhoids; Mayinglong musk hemorrhoids ointment; Diosmin tablets; Efficacy

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1. Introduction

Acute hemorrhoids can cause symptoms such as anal pain, edema, and hematochezia, as well as prolapse of hemorrhoidal nuclei, which have a significant impact on patients' daily lives and require early treatment. Surgical treatment can remove hemorrhoidal nuclei, but it is an invasive procedure that can cause changes in anal anatomy, even exacerbate physiological stress responses in the perianal area, increase the production of inflammatory factors in the body, and enhance vascular permeability. Additionally, a few patients may experience complications such as edema after surgery, which may affect prognosis. In modern medical concepts, the primary goal of clinical treatment for hemorrhoids is to eliminate symptoms, rather than remove hemorrhoidal nuclei. Therefore, it is

crucial to explore effective medications to relieve postoperative symptoms. Diosmin Tablets, used in the treatment of acute hemorrhoids, can block the release of inflammatory mediators in the body, improve microcirculation, accelerate blood flow, shorten the time for edema resolution and absorption, and achieve anti-inflammatory and anti-swelling effects. However, its analgesic effect is limited. Mayinglong Musk Hemorrhoids Ointment is a traditional Chinese medicine preparation composed of multiple herbal medicines that can provide analgesic and anti-swelling effects^[1]. Based on this, this article explores the clinical efficacy of combined therapy with Diosmin Tablets and Mayinglong Musk Hemorrhoids Ointment using a sample of 50 patients with acute hemorrhoids who visited the hospital from January 2023 to January 2025.

2. Materials and methods

2.1. Materials

A total of 50 patients with acute hemorrhoids who visited our hospital from January 2023 to January 2025 are selected as samples and randomly divided into two groups using a lottery method. There was no significant difference in baseline data between Group A and Group B ($P > 0.05$), as shown **Table 1**.

Table 1. Analysis of acute hemorrhoid data

Group	<i>n</i>	Gender (%)		Age (years)	
		Male	Female	Range	Mean ± SD
Group A	25	16 (64.00%)	9 (36.00%)	22–71	41.35 ± 2.62
Group B	25	15 (60.00%)	10 (40.00%)	26–68	39.39 ± 2.41
χ^2/t	-	0.0849		2.7529	
<i>P</i>	-	0.7708		0.0083	

2.2. Inclusion and exclusion criteria

2.2.1. Inclusion criteria

- (1) Meet the criteria for hemorrhoids in the “Guidelines for Diagnosis and Treatment of Hemorrhoids in China”^[2]
- (2) Sign the consent form
- (3) Present with symptoms such as prolapse of hemorrhoidal nodes and hematochezia

2.2.2. Exclusion criteria

- (1) Hemorrhagic shock
- (2) Coagulation disorders
- (3) Concomitant with other anorectal diseases

2.3. Treatment methods

- (1) Group A: Oral administration of Diosmin tablets (Nanjing Chia Tai Tianqing Pharmaceutical Co., Ltd.; National Medical Approval Number H20058471; 0.45g), with a single dose of 1.35g, twice per day, taken at noon and evening. After 4 days of administration, the dose was changed to a single dose of 0.9g, twice per day. Additionally, Mayinglong Musk Hemorrhoids Ointment (Mayinglong Pharmaceutical Group Co.,

Ltd.; National Medical Approval Number Z42021920; 10g) was applied into the anus, 2.5g each time, twice per day (morning and evening). The medication was administered for 7 days.

- (2) Group B: Mayinglong Musk Hemorrhoids Ointment was applied into the anus, 2.5g each time, twice per day (morning and evening). The medication was administered for 7 days.

2.4. Observation indicators

- (1) Efficacy: After 7 days of medication, fresh granulation tissue growth is visible on the wound surface, without symptoms such as edema, hematochezia, and pain, which was recorded as markedly effective. No significant redness or swelling and oozing of fluid on the wound surface, controllable pain, and relief of perianal symptoms, which is recorded as effective. Edema on the wound surface, visible excessive oozing of fluid, and significant perianal pain, which is recorded as ineffective.
- (2) Postoperative wound recovery time and perianal pain score: Record the time of perianal edema, wound healing time, and VAS score (0–10 points, with the score being directly proportional to perianal pain) after 7 days of medication.
- (3) Symptom score of hemorrhoids: Evaluate the degree of hematochezia, anal itching, anal bulging, and pain according to the criteria of none, mild, moderate, and severe, with scores ranging from 0 to 3.
- (4) Stress indicators: Peripheral venous blood was drawn before medication and after 7 days of medication. Serum is collected, and cortisol and norepinephrine levels are monitored using an immunochromatographic assay.

2.5. Statistical analysis

Data are processed using SPSS 23.0 software. Count data are tested using the chi-square test and described using percentages. Measurement data are tested using the t-test and recorded using mean \pm standard deviation. Statistical significance is set at $P < 0.05$.

3. Results

3.1. Efficacy

The efficacy rate of Group A was 96.00%, which was higher than that of Group B (76.00%). The difference was statistically significant ($P < 0.05$), as shown in **Table 2**.

Table 2. Comparison of efficacy in acute hemorrhoids (n,%)

Group	Markedly effective	Effective	Ineffective	Effectiveness rate
Group A ($n=25$)	13 (52.00%)	11 (44.00%)	1 (4.00%)	24 (96.00%)
Group B ($n=25$)	7 (28.00%)	12 (48.00%)	6 (24.00%)	19 (76.00%)
χ^2	-	-	-	4.1528
P	-	-	-	<0.05

3.2. Wound recovery time and anal pain scores

The duration of perianal edema and wound healing time in Group A were shorter than those in Group B, and the VAS scores were lower in Group A compared to Group B, with $P < 0.05$, as shown **Table 3**.

Table 3. Comparison of wound recovery time and anal pain scores in acute hemorrhoid disease ($\bar{x} \pm s$)

Group	Perianal edema time (days)	Wound healing time (days)	VAS score (points)
Group A (n=25)	12.01 \pm 1.25	26.01 \pm 2.25	1.21 \pm 0.42
Group B (n=25)	15.43 \pm 1.43	29.43 \pm 3.43	3.33 \pm 0.69
<i>t</i>	9.0032	4.1686	13.1225
<i>P</i>	< 0.01	< 0.01	< 0.01

3.3. Hemorrhoid symptom scores

After medication, the hemorrhoid symptom scores in Group A were lower than those in Group B, with $P < 0.05$, as shown in **Table 4**.

Table 4. Comparison of hemorrhoid symptom scores in acute hemorrhoid disease ($\bar{x} \pm s$)

Group	Hematochezia(points)		Anal itching(points)	
	Before medication	After medication	Before medication	After medication
Group A (n=25)	2.49 \pm 0.32	0.81 \pm 0.18	2.53 \pm 0.36	0.74 \pm 0.21
Group B (n=25)	2.47 \pm 0.35	1.36 \pm 0.26	2.51 \pm 0.38	1.39 \pm 0.28
<i>t</i>	0.2109	8.6963	0.1910	9.2857
<i>P</i>	0.8339	< 0.01	0.8493	< 0.01

Group	Anal distension(points)		Pain(points)	
	Before medication	After medication	Before medication	After medication
Group A (n=25)	2.44 \pm 0.33	0.75 \pm 0.21	2.36 \pm 0.33	0.71 \pm 0.24
Group B (n=25)	2.42 \pm 0.34	1.42 \pm 0.26	2.39 \pm 0.34	1.43 \pm 0.28
<i>t</i>	0.2111	10.0235	0.3166	9.7619
<i>P</i>	0.8337	< 0.01	0.7529	< 0.01

3.4. Stress indicators

After medication, the stress indicators in Group A were lower than those in Group B, with $P < 0.05$, as shown **Table 5**.

Table 5. Comparison of stress indicators in acute hemorrhoid disease ($\bar{x} \pm s$)

Group	Cortisol ($\mu\text{g/L}$)		Norepinephrine ($\mu\text{g/L}$)	
	Before medication	After medication	Before medication	After medication
Group A (n=25)	127.42 \pm 2.81	53.66 \pm 1.69	164.28 \pm 8.43	78.33 \pm 3.69
Group B (n=25)	127.39 \pm 2.79	84.44 \pm 1.98	164.33 \pm 8.41	88.26 \pm 4.29
<i>t</i>	0.0379	59.1202	0.0210	8.7742
<i>P</i>	0.9699	< 0.01	0.9833	< 0.01

4. Discussion

Hemorrhoids are caused by multiple adverse factors that lead to local congestion, combined with abnormalities in the hemorrhoidal venous plexus and spasms of the perianal sphincter, resulting in acute attacks of hemorrhoids. After an acute attack of hemorrhoids, patients experience pain and discomfort around the anus, especially after defecation, when the pain intensifies. In a few cases, the pain may spread to the back of the thighs or buttocks. As the disease progresses, the rectal mucosa becomes damaged, leading to acute bleeding manifested as visible blood on the surface of the stool, or symptoms such as anal bleeding or jet-like bleeding. The observed blood is mostly bright red. During acute episodes, anal masses protrude, and some patients can manually reduce them. However, if the edema is obvious and the compression is severe, they cannot be reset. As the disease progresses, patients often develop local inflammatory reactions, and a large number of inflammatory factors are secreted around the anus, continuously stimulating the skin and mucosa around the anus, which can cause itching, bloating, and other symptoms.

Severe itching can affect nighttime sleep and reduce sleep quality. Currently, there are various theories about the pathogenesis of acute hemorrhoids in clinical practice, which may be closely related to the downward movement of the anal cushion and varicose veins. Analyzing the physiological and anatomical structure of the anus, there is a vascular cushion on the inner side of the anal canal, which is ring-shaped and called the “anal cushion.” It has functions such as precise control of defecation and adjustment of the closure state of the anal canal. The internal vascular network is rich, and its adjacent areas have connective tissue and smooth muscle. When the body is in a healthy state during defecation, the anal cushion is pushed out with the feces, and after completing defecation, the anal cushion retracts by itself.

However, under the influence of adverse factors, the elasticity of the anal cushion is damaged, which can lead to problems such as hyperplasia, hypertrophy, congestion, and downward movement of the anal cushion. Over time, “hemorrhoids” are formed ^[3]. In addition, the venous plexus in the anal canal area of the human body is rich, and its anatomical location is at the lowest point of blood transportation in the abdominal and pelvic cavities. Moreover, there are no venous valves in the veins of the anal canal area, making it more susceptible to pathological changes such as congestion and blood stasis, especially for those who are constipated or sit for long periods. Blood stasis in the venous plexus of the anal canal area can lead to the formation of “hemorrhoids” in severe cases, which can also cause acute attacks of hemorrhoids ^[4]. Currently, there are many clinical treatment options for acute hemorrhoids, such as surgery, physical therapy, oral medications, suppositories, ointments, etc. Different treatment options have different effects on controlling hemorrhoids.

Acute hemorrhoids surgery leaves wounds that expose nerve endings, damage capillaries, and are affected by necrotic tissue that can impair wound drainage. This can exacerbate inflammatory responses in the wound, leading to edema and even delayed healing. Therefore, it is crucial to explore effective medications that can accelerate post-surgical recovery. Mayinglong Musk Hemorrhoids Ointment is a traditional Chinese medicine preparation composed of various herbal ingredients. Among them, cow bezoar can clear the heart, detoxify, cool the liver, calm the wind, induce resuscitation, and eliminate phlegm; musk can relieve pain, promote blood circulation, disperse nodules, and eliminate necrosis while promoting tissue regeneration; borax can detoxify and clear heat; pearls can heal wounds, promote tissue regeneration, reduce heat, and detoxify; borneol can relieve pain, reduce swelling, and enhance musk’s ability to eliminate necrosis and promote tissue regeneration; and calamine can reduce swelling, stop bleeding, promote convergence, and prevent decay ^[5].

The combination of these ingredients in Mayinglong Musk Hemorrhoids Ointment can effectively eliminate

necrosis, promote tissue regeneration, clear heat and detoxify, reduce swelling, and relieve pain^[6]. However, the onset of action of Mayinglong Musk Hemorrhoids Ointment alone is slow, and its overall regulatory effect is limited. Diosmin tablets can activate perianal cells, stimulate cell migration in affected areas, dilute blood, restore perianal blood circulation, and release complement through oral administration to inhibit perianal inflammation and achieve anti-inflammatory effects. Additionally, diosmin tablets can stimulate venous dilation, protect perianal blood vessels, accelerate perianal blood circulation, stimulate lymphatic vessel contraction, inhibit venous blood stasis, accelerate tissue fluid reflux, and facilitate the resolution of perianal edema^[7].

The combination of Mayinglong Hemorrhoids Ointment and Diosmin tablets can synergistically enhance their effects, accelerate the absorption of edema, promote wound blood circulation, reduce perianal pain, facilitate wound healing, and improve patient outcomes. During medication treatment, patients should also be instructed to take sitz baths, clean the anal area promptly, maintain local cleanliness and dryness, and apply the medication evenly as prescribed to ensure its full effectiveness. Furthermore, patients with hemorrhoids should be advised to plan their meals appropriately, avoid stimulating and greasy foods, increase their intake of fresh fruits and vegetables to maintain smooth bowel movements, change their underwear more frequently, and seek prompt re-examination and adjustment of treatment plans if they notice a significant increase in bleeding during medication.

Based on the data analysis in this article, the efficacy, perianal edema time, wound healing time, and VAS scores of group A are better than those of group B, with $P < 0.05$. The reason for this is that Mayinglong Musk Hemorrhoids Ointment is a synergistic effect of multiple herbal ingredients, and the medicinal ingredients directly contact the wound, resulting in a high perianal blood concentration. This can inhibit perianal inflammation, relieve perianal pain, and also exert effects such as promoting blood circulation, healing wounds, and promoting tissue generation, which is beneficial for the repair of perianal wounds. Based on modern pharmacological analysis, borneol in Mayinglong Musk Hemorrhoids Ointment can resist *Staphylococcus aureus* and *Escherichia coli*, reducing the number of perianal bacteria. When combined with diosmin tablets, it can enhance the anti-inflammatory effect^[8].

Diosmin tablets are a type of flavonoid medication, and its medicinal ingredients can act on the venous wall, prolonging the contraction time of the venous wall and facilitating venous return, thereby improving perianal blood circulation. The medicinal ingredients can also stimulate lymphatic peristalsis and accelerate tissue fluid reflux, resulting in rapid absorption of perianal edema^[9]. In addition, Diosmin tablets can inhibit the expression of inflammatory factors, accelerate the reconstruction of perianal microcirculation, and facilitate the prognosis of hemorrhoids. Another set of data shows that the hemorrhoid symptom scores and stress indicators of group A are better than those of group B, with $P < 0.05$. The reason for this is that after an acute hemorrhoid attack, the production of inflammatory factors around the anus increases, which can aggravate the stress response. The combination of Mayinglong Musk Hemorrhoids Ointment and Diosmin tablets can inhibit inflammation in the perianal wound, relieve perianal pain, and improve patient comfort. The synergistic effect of the two medications can improve perianal blood circulation, inhibit excessive activation of the sympathetic nervous system in the body, and reduce stress indicators such as norepinephrine and cortisol^[10].

5. Conclusion

In summary, the combination of Mayinglong Musk Hemorrhoids Ointment and Diosmin tablets for the treatment of patients with acute hemorrhoids after surgery results in reduced stress indicators in the body, relief of

hemorrhoid-related symptoms, reduced perianal pain, and shortened duration of symptoms. This treatment can be promoted.

Disclosure statement

The author declares no conflict of interest.

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