

Therapeutic Effect of Integrated Traditional Chinese and Western Medicine on Anal Pruritus After Anorectal Surgery

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Abstract: *Objective:* To explore the therapeutic effect of integrated traditional Chinese and western medicine on anal pruritus after anorectal surgery. *Methods:* Ninety-eight patients with anal pruritus after anorectal surgery in our hospital were selected as the research subjects. They were divided into two groups, the control group (50 cases) and the study group (48 cases), according to the treatment plan. The control group was under a simple western medicine treatment plan, while the study group was under an integrated traditional Chinese and western medicine treatment plan. The overall efficacy, severity of anal pruritus, time to eliminate clinical symptoms, and anxiety and depression scores of the two groups of patients under different treatment plans were compared. *Results:* After two weeks of treatment, the total effective rate of the study group was 95.83%, which was significantly higher than that of the control group (82.00%, $P < 0.05$). After 7 and 14 days of treatment, the anal pruritus scores improved significantly in both the groups, but the study group was superior to the control group, with statistical difference ($P < 0.01$). The time of disappearance of skin itching and skin damage in the study group was shorter than that in the control group. After 14 days of treatment, the anxiety and depression scores of both groups were lower than those after 7 days of treatment; however, there was statistical difference between the two groups ($P < 0.01$). *Conclusion:* In the clinical treatment of anorectal postoperative diseases, such as anal pruritus, the combination of traditional Chinese and western medicine can significantly improve the symptoms of pruritus, shorten the time of disappearance of clinical symptoms, improve depression and anxiety, and create a positive clinical application value in promoting the rehabilitation of patients and improving their quality of life.

Keywords: Integrated traditional Chinese and western medicine; Anorectal surgery; Anal pruritus

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1. Introduction

Anal pruritus is a common complication after anorectal surgery, which not only brings pain to patients, but also affects their normal life. Studies have shown that about 70% of patients with long-term anal itching symptoms will have anal dysfunction, and other diseases will develop with improper treatment ^[1]. At present, there are many ways to treat anal pruritus, including traditional conservative treatment ^[2] + surgical resection ^[3] + external treatment of Chinese medicine and modern scientific and technological means, but the outcome is not ideal ^[4,5]. In recent years, with the advancements in medical research and the integration

of traditional Chinese and western medicine treatment methods and advanced diagnosis and treatment technologies, the combination of traditional Chinese and western medicine treatment has become the main means to address the issues of anal pain and perianal itching [6,7]. In order to explore the therapeutic effect of the combination of traditional Chinese and western medicine on anal pruritus after anorectal surgery, 98 patients with anal pruritus after anorectal surgery were studied. Some of the patients were under a simple western medicine treatment plan, while others were under a combination of traditional Chinese and western medicine treatment plan. The overall efficacy, severity of anal pruritus, time of disappearance of clinical symptoms, and anxiety and depression scores of the two groups of patients under different treatment plans were compared.

2. Data and methods

2.1. General information

Patients with anal pruritus after anorectal surgery who were admitted to Ankang Traditional Chinese Medicine Hospital from October 2021 to September 2022 were selected as the research subjects. They were divided into two groups, the control group and the study group, according to the treatment plan. Among them, there were 50 cases in the control group, including 29 male and 21 female patients, age ranging from 19 to 65, with an average age of 32.5 ± 4.8 years; there were 48 cases in the study group, age ranging from 21 to 67, with an average age of 31.8 ± 5.2 years. The general data of the patients in both the groups showed $P > 0.05$. The study was approved by the hospital ethics committee for implementation, and the patients and their families had given informed consent.

2.2. Diagnostic criteria

2.2.1. Western medicine

Referring to the Diagnosis and Treatment of Anorectal Diseases in China, the diagnostic criteria for anal pruritus are as follows: (1) a persistent and stubborn history of perianal itching (mild itching, as if insects crawling under the skin; severe itching, severe and intolerable, which may cause insomnia, irritability, and other symptoms); (2) in the early stage of the disease, only slight flushing or no obvious abnormalities observed across the anal skin; with disease progression, new and old scratches, scabs, local skin lesions, wrinkles, and other skin injuries are observed around the anus; in the extended course of the disease, local grayish white skin changes are observed around the anus.

2.2.2. Traditional Chinese medicine

Referring to the Guidelines for Diagnosis and Treatment of Common Diseases in the Anorectal Department of Traditional Chinese Medicine and the Therapeutic Effect Criteria for Diagnosis of Diseases and Syndromes of Traditional Chinese Medicine, the diagnostic criteria of anal pruritus with damp heat block syndrome [8] are as follows: presence of one main symptom (local itching around the anus, with varying degrees of dampness, exudation, and ulceration and severe itching pain after stimulation of anal pruritus) and 2 or more secondary symptoms (flushing, irritability, bitter taste in the mouth, dry throat, and sticky stools) with red tongue, yellow and greasy coating, and stringy pulse.

2.3. Inclusion and exclusion criteria

2.3.1. Inclusion criteria

(1) Those who met the aforementioned diagnostic criteria for anal pruritus (damp heat block type) in traditional Chinese medicine and western medicine; (2) age ranging from 19 to 67 years old; (3) those who were not under any other treatment regimens that may affect the research results during the study; (4) those who understood and signed the informed consent form voluntarily.

2.3.2. Exclusion criteria

(1) Patients with perianal skin pruritus caused by hemorrhoids, anal fistula, anal fissure, perianal abscess, perianal eczema, parasites, and other anal diseases; (2) patients with perianal skin itching caused by drug and food allergy; (3) elderly or infirm and mentally ill patients who could not cooperate; (4) female patients who were menstruating, in pregnancy, or lactating; (5) those allergic to the drug of study or unwilling to participate in the study.

2.4. Treatment methods

The control group was treated with western medicine alone. First, the patients first instructed to pay attention to personal hygiene at all times and wash regularly to avoid contamination around the anus and perineum; the patients were prohibited to scratch with their hands and to eat spicy or stimulating food. Second, triamcinolone acetonide econazole cream (Pevisone, 15 g/piece, provided by XI'an Janssen Pharmaceutical Co., Ltd., National Drug Approval No. H20000454) was prescribed to the patients for external use; the drug was evenly applied to the itching area at the anus and the surrounding area, gently rubbing for 1 min, once in the morning and another in the evening, over two courses, with each course lasting seven days; the dosage of ointment or the frequency of medication was reduced if the symptoms were alleviated.

The study group was treated with a combination of traditional Chinese and western medicine. In addition to the cream, the patients were treated with traditional Chinese medicine fumigation and hip bath. In order to boil 800 mL of Xiaoyang decoction, 20 g of *Sophora flavescens*, 20 g of rhubarb, 15 g of *Kochia scoparia*, 10 g of *Cnidium monnieri*, 10 g of *Phellodendron chinense*, 10 g of *Angelica dahurica*, 10 g of black plum, and 10 g of argyi leaf were used. Placing 400 mL of the decoction into a basin each time and adding 1,000 mL of boiled water, fumigation of the anus with traditional Chinese medicine was done; the patients were requested to sit in a sitz bath, soaking their anal region in the medicinal solution for 10 min, when the temperature drops to a comfortable, warm temperature (36°C–40°C), and then wipe dry with a clean, soft cloth.

2.5. Observations

(1) Overall efficacy

According to the Guiding Principles for Clinical Research of New Chinese Medicines (trial) and the Diagnostic Efficacy Standards of TCM Anorectal Diseases and Syndrome, the overall efficacy of the two groups after two courses of treatment was analyzed. Based on the efficacy index, the patients were divided into four categories: cured, markedly effective, effective, and ineffective. Total effective rate = (cured + markedly effective + effective)/total number of people × 10%.

(2) Severity of anal pruritus

According to the 2012 Guidelines for Diagnosis and Treatment of Common Diseases in Anorectal Department of Traditional Chinese Medicine, the severity of anal pruritus was scored for the two groups of patients before and after treatment. The points were given as follows: (1) 0, no anal pruritus; 2, mild anal pruritus, requiring no treatment; 4, moderate anal pruritus, requiring local medication; 6, severe anal itching, without relief after local medication. The clinical effects of different treatment schemes were observed.

(3) Time of disappearance of clinical symptoms

The time of disappearance of skin itching and skin damage between the two groups was compared.

(4) Anxiety and depression

An assessment for anxiety and depression was carried out in combination with the clinical evaluation criteria, and the improvements in anxiety and depression as well as other adverse psychology in the two groups at different treatment stages were compared^[9].

2.6. Statistical analysis

SPSS 22.0 was used to process the research data, and the counting data were expressed in percentage (%) by chi-squared (χ^2) test, while the measurement data were expressed in mean \pm standard deviation ($\bar{x} \pm s$). After t-test, $P < 0.05$ was considered statistically significant.

3. Results

3.1. Comparison of the overall efficacy between the two groups

After two weeks of treatment, the overall efficacy of both the control group and the study group improved. The total effective rate of the study group was 95.83%, which was significantly better than that of the control group (82.00%, $P < 0.05$), as shown in **Table 1**.

Table 1. Comparison of the overall efficacy of the two groups after 2 weeks of treatment (n/%)

Group	n	Cured	Markedly effective	Effective	Ineffective	Overall efficacy
Control group	50	6 (12.00)	21 (42.00)	14 (28.00)	9 (18.00)	41 (82.00)
Study group	48	8 (16.67)	22 (45.83)	16 (33.33)	2 (4.17)	46 (95.83)
χ^2						4.7030
P						0.0301

3.2. Comparison of the severity of anal pruritus between the two groups before and after treatment

Before treatment, the anal pruritus scores of the control group and the study group were 5.88 ± 2.24 and 6.02 ± 2.09 , respectively, with no comparable difference ($P > 0.05$). However, after 7 and 14 days of treatment, the anal pruritus scores of the control group were 4.32 ± 1.78 and 2.28 ± 1.07 , respectively, while the anal pruritus scores of the study group were 3.58 ± 1.42 and 1.26 ± 1.04 , respectively, indicating that the symptom improved significantly in both groups of patients. The improvement in symptoms after 14 days of treatment was better than that after 7 days of treatment. The comparison between the two groups showed that the study group was superior to the control group, with statistical difference ($P < 0.01$), as shown in **Table 2**.

Table 2. Comparison of anal pruritus severity between the two groups before and after treatment ($\bar{x} \pm s$, points)

Group	n	Before treatment	After treatment			P
			7 d	14 d	t	
Control group	50	5.88 ± 2.24	4.32 ± 1.78	2.28 ± 1.07	6.9456	0.0000
Study group	48	6.02 ± 2.09	3.58 ± 1.42	1.26 ± 1.04	9.1320	0.0000
t		0.3196	2.2692	4.7826		
P		0.7500	0.0255	0.0000		

3.3. Comparison of time of disappearance of clinical symptoms between the two groups

By comparing the time of disappearance of skin itching and skin damage between the two groups, it was found that the duration was significantly shorter in the study group compared to the control group ($P < 0.05$). See **Table 3** for details.

Table 3. Comparison of time of disappearance of clinical symptoms between the two groups ($\bar{x} \pm s$, h)

Group	n	Skin itching	Skin damage
Control group	50	16.55 ± 7.52	48.52 ± 8.46
Study group	48	10.46 ± 4.23	25.66 ± 6.54
t		4.9133	14.9225
P		0.0000	0.0000

3.4. Comparison of anxiety and depression scores (HADS) between the two groups

Before treatment, there was no significant difference in the anxiety and depression scores between the two groups ($P > 0.05$). However, after 7 and 14 days of treatment, the anxiety and depression scores of the patients in the control group were 4.32 ± 1.78 and 2.28 ± 1.07 , respectively, while the anxiety and depression scores of the patients in the study group were 3.58 ± 1.42 and 1.26 ± 1.04 , respectively, indicating that anxiety and depression as well as other negative emotions significantly improved in both the groups. After 14 days of treatment, the anxiety and depression scores of both the groups were lower than those after 7 days of treatment. The comparison between the two groups showed that the study group was superior to the control group, with statistical difference ($P < 0.01$), as shown in **Table 4**.

Table 4. Comparison of anxiety and depression scores between the two groups before and after treatment ($\bar{x} \pm s$, points)

Group	n	Before treatment	After treatment			
			7 d	14 d	t	P
Control group	50	12.48 ± 3.92	9.41 ± 3.42	2.37 ± 1.94	12.6606	0.0000
Study group	48	12.25 ± 3.07	8.02 ± 3.31	1.65 ± 0.89	12.8758	0.0000
t		0.3225	2.0432	2.3449		
P		0.7478	0.0438	0.0211		

4. Discussion

Anal pruritus is a common complication after anorectal surgery and a major problem that often puzzles patients and their families. Patients usually have difficulty defecating or experience anal itching after defecation. Anal pruritus after anorectal resection affects not only the quality of life of patients, but also their psychological aspect [10]. The main causes of anal pruritus are as follows: (1) wound infection caused by improper operation during surgery; (2) the body's resistance against infection reduces after surgery; (3) non-compliance or untimely consumption of oral medications after surgery; (4) not keeping the anal area clean after surgery; (5) damage of certain nerve fibers as a result of the surgery; (6) excessive friction and scratching of the skin around the anus during surgery, thus causing itching; (7) local skin inflammation or fibrous tissue hyperplasia; (8) adhesion between anorectal sphincter and multiple wounds from surgery. In order to treat anal pruritus after anorectal surgery, western medicine, traditional Chinese medicine, and a combination of both can be adopted.

In western medicine, local application of drugs is mainly used. According to the severity of pruritus, three grades of antipruritic agents can be used accordingly: A, B, and C. For patients with mild symptoms, Grade A antipruritic agents can be used. These agents can generally relieve the symptoms. For those with severe symptoms but no more than 3 days, Grade B antipruritic agents should be used first, followed by Grade C antipruritic agents if the symptoms persist. Common antipruritic agents include chlorpheniramine, promethazine, loratadine, terbutaline, Pevisone, and desonide, but they should be used under the guidance of a doctor [11].

There are three main therapeutic methods in traditional Chinese medicine: drug therapy, acupuncture and moxibustion therapy, and traditional Chinese medicine fumigation therapy. (1) Drug therapy. Anal pruritus is often caused by accumulation of damp and heat, invasion of external evils, and chronic anal eczema, blocked by the evils of cold and dampness, and the loss of qi and blood from nourishing. The itching site is often accompanied by skin rash, swelling, and raised temperature. At times, there may be even pustules around the itching area. Therefore, the most direct and effective treatment method is to use Chinese medicine for internal adjustment and local external use. (2) Acupuncture and moxibustion therapy. Traditional Chinese medicine treatment for anal pruritus after anorectal surgery is mainly based on the TCM theory and meridian theory. Acupuncture and moxibustion therapy can warm yang and dredge fu organs, dissipate phlegm and disperse knots, as well as dredge collaterals and relieve pain when treating external diseases. It can also stimulate the body's healthy qi, help the healthy qi, improve the patient's physique, and enhance the disease resistance. This condition should be treated according to its characteristics based on syndrome differentiation and treated with syndrome addition and subtraction. (3) Traditional Chinese medicine fumigation therapy. Traditional Chinese medicine fumigation therapy is commonly used by applying it on the affected part to remove dampness and relieve itching and pain. Common methods include acupoint injection, moxibustion, *etc.* This therapy is individualized and mainly aims at the treatment of anal pruritus based on syndrome differentiation, which would not only relieve the pain of patients, but also improve their postoperative physique, thus improving their quality of life and reducing the recurrence rate [6].

The combination of traditional Chinese medicine and western medicine clears away heat and damp, dispels wind, and relieves itching. In this study, a traditional Chinese medicine decoction was prepared with Kushen, rhubarb, *Phellodendron*, wormwood, and other traditional Chinese herbs that have the effect of heat clearing, detoxification, as well as swelling and dampness elimination. Fumigating and washing the skin of patients locally can promote skin absorption and relieve anal pruritus. In combination with western medicine treatment using antibacterial drugs, antipruritic ointment is applied externally, so as to achieve the effect of contraction and promote the healing of skin injury and intestinal balance. Triamcinolone acetonide, a western medicine, is also applied externally. It is a glucocorticoid, which has anti-inflammatory, antipruritic, and anti-allergic effects. Therefore, it is effective for a variety of skin inflammatory conditions caused by bacteria and fungi.

In this study, the overall efficacy, severity of anal itching, time of disappearance of clinical symptoms, and anxiety and depression scores of the two groups of patients under the two treatment plans (pure western medicine treatment and integrated traditional and western medicine treatment) were compared. It was found that both treatment plans had positive effects on relieving pruritus and promoting the prognosis of patients. However, all the outcome indicators of the study group were better than those of the control group. After two weeks of treatment, the total effective rate of the study group was 95.83%, which was significantly better than that of the control group (82.00%, $P < 0.05$). Before treatment, the anal pruritus scores of the control group and the study group were 5.88 ± 2.24 and 6.02 ± 2.09 , respectively, with no comparable difference ($P > 0.05$); after 7 and 14 days of treatment, the anal pruritus scores of the patients in the control group were 4.32 ± 1.78 and 2.28 ± 1.07 , respectively, while the anal pruritus scores of the patients in the

study group were 3.58 ± 1.42 and 1.26 ± 1.04 , respectively, indicating that the symptom significantly improved in both the groups. The improvement of anal pruritus after 14 days of treatment was better than that after 7 days of treatment. The comparison between groups showed that the study group was superior to the control group, with statistical difference ($P < 0.01$). The time of disappearance of skin itching and skin damage in the study group was shorter than that in the control group, with statistically significant difference ($P < 0.05$). Before treatment, there was no significant difference in the anxiety and depression scores between the two groups ($P > 0.05$); however, after 7 and 14 days of treatment, the anxiety and depression scores of the patients in the control group were 4.32 ± 1.78 and 2.28 ± 1.07 , respectively, while the anxiety and depression scores of the patients in the study group were 3.58 ± 1.42 and 1.26 ± 1.04 , respectively, indicating that the anxiety and depression as well as other negative emotions in both the groups had significantly improved. After 14 days of treatment, the anxiety and depression scores of the patients were lower than those after 7 days of treatment. The comparison between the two groups showed that the study group was superior to the control group, with statistical difference ($P < 0.01$).

In conclusion, the use of a combination of traditional Chinese medicine and western medicine for patients with anal pruritus after anorectal surgery can significantly relieve their pruritic symptoms, promote the healing of skin injuries, and support their rehabilitation; thus, it can be widely used in clinical practice.

Disclosure statement

The authors declare no conflict of interest.

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