

Application Value of Moxibustion Combined with Acupoint Application in Patients with Abdominal Distension after Gynecological Surgery

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Abstract: *Objective:* To explore the application value of moxibustion and acupoint application in the treatment of postoperative abdominal distention in patients undergoing gynecological surgery. *Methods:* Seventy-two patients who underwent gynecological surgery in our hospital from May 2020 to May 2021 were randomly divided into two groups. Group A was treated with moxibustion and acupoint application, and group B was treated with routine treatment. The incidence of postoperative abdominal distention, therapeutic effect of abdominal distention, defecation time, exhaust time, recovery time of bowel sounds and the changes of patients' quality of life were analyzed. *Results:* The incidence of abdominal distension in group A was 22.22%, which was lower than 41.47% in group B ($P < 0.05$). The therapeutic effect of abdominal distension in group A was 87.50%, which was higher than 66.67% in group B ($P < 0.05$). The recovery time of first defecation, first exhaust and bowel sound in group A was shorter than that in group B ($P < 0.05$). All postoperative quality of life scores of group A were higher than that of group B ($P < 0.05$). *Conclusion:* On the basis of routine postoperative intervention, moxibustion and acupoint application can reduce the risk of postoperative abdominal distention, reduce the degree of abdominal distention, promote the recovery of intestinal function, shorten the first postoperative exhaust and defecation time, and then improve the quality of life of patients.

Keywords: Gynecological operation; Postoperative abdominal distension; Moxibustion; Acupoint application; Treatment effect

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1. Introduction

The rate of gynecological surgery has shown an increasing trend in recent years. Many factors, such as surgical and mechanical stimulation, preoperative anesthesia and tissue injury as a result of surgery can affect the patient's intestinal function and cause postoperative abdominal distension, abdominal pain and intestinal paralysis. In addition, affected by incision pain after operation, it can limit the patient's activities, and even lead to visceral dysfunction, resulting in varying degrees of *qi* and blood stasis, and then cause abdominal distension. After years of continuous development, minimally invasive surgery has gradually been used in the treatment of gynecological diseases such as hysteromyoma, ectopic pregnancy, ovarian cyst and infertility. It has the advantages of small trauma, low intraoperative bleeding and fast postoperative recovery, which is safer than traditional surgery. However, owing to many factors such as preoperative anesthesia, intraoperative injection of carbon dioxide and postoperative bed rest, the actual laparoscopic

surgery can easily cause abdominal distension, nausea and vomiting and affect postoperative rehabilitation. Based on the above-mentioned symptoms, antiemetic drugs and exhaust-promoting drugs were used for routine treatment, and patients were guided to get out of bed, but the overall curative effect was less than satisfactory. Relevant literature reports that on the basis of routine treatment after gynecological surgery, the application of traditional Chinese medicine characteristic therapies such as moxibustion and acupoint application can reduce the risk of postoperative abdominal distension and alleviate gastrointestinal dysfunction [1]. In this study, 72 cases of gynecological surgery were selected to explore the therapeutic effect of moxibustion and acupoint application after gynecological surgery.

2. Materials and methods

2.1. Materials

In group A, the research subjects were aged 25–70 years, with a mean age of 41.28 ± 3.24 years. In group B, the subjects were aged 26–71 years, with a mean age of 41.33 ± 3.35 years. Selection criteria of research subjects are as follows: (i) patients with indications for gynecological abdominal surgery; (ii) patients who have been informed of the study overview and have agreed to participate; (iii) patients without a history of drug allergy in this study; (iv) patients without a history of asthma; (v) patients without damage or ulcer on the skin in the place of traditional Chinese medicine application and moxibustion; and (vi) patients were mentally normal.

Exclusion criteria of this study are as follows: (i) patients with water electrolyte imbalance; (ii) patients with acid-base imbalance; (iii) patients with liver and kidney diseases; (iv) patients with nervous system diseases; (v) patients with heat intolerance; and (vi) patients with a history of gastrointestinal tract diseases.

The sample data of gynecological operation in the two groups were compared ($P > 0.05$).

2.2. Treatment methods

Group A was treated with moxibustion and acupoint application. After gynecological surgery, moxibustion and acupoint application were carried out continuously for 3 days, once a day. During the treatment, it is necessary to explain the therapeutic value of moxibustion and acupoint application to the patients, and assist patients in the lying down position. The moxibustion scheme is as follows: *zhongwan*, *tianshu*, *shenque*, *zusanli* and other acupoints were selected, and the ignited moxa stick was fixed in the center of the moxibustion box. Then, mild moxibustion was carried out at the above-mentioned acupoints, and each acupoint was removed for 10–15 minutes. Then, acupoint application was carried out. The scheme is as follows: *Shenque* point is selected as the application point. An appropriate amount of raw Radix et Rhizoma Rhei, Natrii Sulfas, Cortex Magnoliae Officinalis, Fructus Aurantii, Radix Aucklandiae, Radix Codonopsis, Rhizoma Atractylodis Macrocephalae, Semen Persicae, borneol and other traditional Chinese medicine was taken to be made into a paste, pasted evenly in the middle of the application, and placed on *shenque* point. It was torn off after 4 hours. In addition, during moxibustion, it is necessary to observe the patient's reaction and instruct the patient to drink more water after moxibustion to promote detoxification. During acupoint application, it is necessary to observe whether the application position is allergic and whether there are adverse reactions. At the same time, the application area should avoid the incision to avoid polluting the dressing. When changing the ointment, it is necessary to pay attention to evaluate the patient's physical state and to prevent the ointment from falling off. If the ointment falls off, we should inform the doctor and reapply it as soon as possible. In case of blisters, pruritus, rash and other allergies in the application area, the administration shall be stopped and corresponding treatment shall be carried out.

Group B was treated with routine treatment after operation. After the completion of gynecological surgery, the patients were guided to stay in a horizontal position and to avoid consuming food. The patients

were also screened by ECG and for blood oxygen indexes, and were given oxygen. Six hours after the operation, the patients were given liquid food in combination with their actual conditions to avoid gas-producing foods such as milk and soybean milk. The patients were assisted to turn over every 2 hours. In combination with their actual conditions, the patients might reasonably carry out activities in the bed. At the same time, the patients were told to eat healthy food. Light and nutritious food was recommended. The principle of eating less and more meals was adopted to avoid chill, cold, spicy and greasy food. The patients with abdominal distention or postoperative nausea and vomiting should be given drugs to protect gastric mucosa, antiemetic drugs and exhaust-promoting drugs according to the doctor's advice, and the patients should be informed of the drug usage, dosage, function, incompatibility and adverse reactions.

2.3. Observation indexes

The curative effect was evaluated in combination with the description on abdominal distention in "Huang Jiashi's Surgery." If abdominal distention disappeared, the anus could exhaust and defecate smoothly, and the bowel sound would be normal, indicating effective treatment. If abdominal distention improved, anal exhaust and defecation were not smooth, and bowel sounds are basically restored; therefore, the record was effective. If the abdominal distention did not improve, the anus was difficult to exhaust and defecate normally, and the bowel sound was not recovered; therefore, the record was invalid.

2.4. Statistical analysis

All indexes of gynecological surgery patients were processed by SPSS 21.0, and the counting and measurement indexes of the two groups are expressed as count (%) and mean±standard deviation, respectively. The difference between the two groups of gynecological surgery patients was analyzed by Chi-squared test and *t* test. $P < 0.05$ indicates statistical difference.

3. Results

3.1. Analysis of postoperative abdominal distension in the two groups

In group A, 8 of the 36 patients with gynecological surgery had postoperative abdominal distention, and the incidence of postoperative abdominal distention was 22.22%. In group B, 15 of the 36 patients with gynecological surgery had postoperative abdominal distention, and the incidence of postoperative abdominal distention was 41.67%. The difference between the two groups was that χ^2 value was 5.1972, $P < 0.05$.

3.2. Analysis of therapeutic effect on postoperative abdominal distension in the two groups

The curative effect of postoperative abdominal distension in group A was 87.50%, which was higher than 66.67% in group B ($P < 0.05$). It was shown in **Table 1**.

Table 1. Analysis of therapeutic effect on postoperative abdominal distension in the two groups

Group	Remarkable effective	Effective	Ineffective	Total effective rate
Group A (n = 8)	5 (62.50)	2 (25.00)	1 (12.50)	87.50
Group B (n = 15)	6 (40.00)	4 (26.67)	5 (33.33)	66.67
χ^2	-	-	-	4.5813
P	-	-	-	<0.05

Data expressed as count (%).

3.3. Analysis of the recovery time of the first exhaust, first defecation and bowel sounds in the two groups

The recovery time of first exhaust, first defecation and bowel sounds in group A were shorter than those in group B ($P < 0.05$). It was shown in **Table 2**.

Table 2. Analysis of the recovery time of the first exhaust, first defecation and bowel sounds in the two groups

Group	First exhaust time	First defecation	Bowel sound recovery time
Group A (n = 36)	19.49±2.36	26.19±3.28	12.78±2.49
Group B (n = 36)	24.87±2.71	31.78±4.11	18.02±3.15
t	8.9827	6.3784	7.8301
P	<0.05	<0.05	<0.05

Data expressed as mean±standard deviation.

3.4. Analysis of postoperative quality of life scores of the two groups

The scores of postoperative quality of life in group A were higher than those in group B ($P < 0.05$). It was shown in **Table 3**.

Table 3. Analysis of postoperative quality of life scores of the two groups

Group	Physical health	Mental health	Social function	Physiological function
Group A (n = 36)	92.17±2.46	93.28±2.68	94.14±2.79	95.24±2.84
Group B (n = 36)	87.69±1.89	85.46±1.93	86.17±1.88	88.19±1.65
t	8.6648	14.2069	14.2140	12.8786
P	<0.05	<0.05	<0.05	<0.05

Data expressed as mean±standard deviation.

4. Discussion

The advancement of minimally invasive surgery technology has helped reduce the surgical incision of patients in gynecological surgery. However, various factors such as anesthesia, dietary intake and pain can inhibit gastrointestinal function and cause symptoms such as difficult defecation and abdominal distention. If it is not diagnosed and treated as soon as possible, it can lead to secondary intestinal infection or even intestinal adhesion, endangering the life and health of patients. Clinically, patients with abdominal distension after gynecological surgery were given gastric mucosal protection drugs, antiemetic drugs and exhaust-promoting drugs to alleviate symptoms, supplemented by routine nursing intervention, but the overall effect was not satisfactory. In the theory of traditional Chinese medicine, it is believed that after gynecological surgery, the patient's vitality is damaged, resulting in the loss of both *qi* and blood, damaging the function of internal organs, and then leading to the adverse *qi* mechanism of intestinal tract. Traditional Chinese medicine scholars believe that *qi* and blood can lead to weakness of large intestine conduction, and

blood deficiency can lead to dry body fluid, which is difficult to moisturize large intestine, resulting in abdominal distention and constipation. Combined with clinical practice, it is proven that moxibustion and traditional Chinese medicine application exert a good treatment effect in the patients undergoing gynecological surgery, which can improve abdominal distension and reduce adverse reactions [2].

Moxibustion treatment refers to placing the ignited moxa stick in the middle of the moxibustion box and smoking specific acupoints, so as to achieve the effects of promoting *qi* and activating blood circulation, warming meridians and dredging collaterals, and regulating viscera. During moxibustion, warm heat acts on the corresponding acupoints, which can also reduce abdominal distention and give play to the effect of antiemesis. In order to obtain good curative effects, acupoints should be selected reasonably. This study selected *zhongwan*, *tianshu*, *shenque*, *zusanli* and other acupoints. Combined with the analysis of traditional Chinese medicine theory, the twelve meridians are the main body of human beings, and the exterior and interior meridians are consistent with the corresponding viscera and collaterals attribution. The eight meridians of odd meridians are staggered between the twelve meridians, which have the function of coordinating *yin* and *yang*, and regulating *qi* and blood of meridians. *Neiguan* point is the pericardial meridian of hand reverting *yin*, which is mainly used for curbing abdominal distension, vomiting, hiccup and abdominal distention. *Zhongwan* point is *Ren* meridian, which is mainly used for cubing abdominal distension, stomachache and vomiting. *Zusanli* point is the stomach meridian of foot-yangming, which is mainly used for curbing abdominal distension, stomachache and loss of appetite. *Shenque* point is an important point of *Ren* meridian, which connects the internal organs and meridians and is mainly used to treat gastrointestinal diseases [3]. Moxibustion on the above-mentioned four functional blood can effectively alleviate the symptoms of abdominal distension, nausea and vomiting.

Traditional Chinese medicine application therapy is a characteristic therapy of traditional Chinese medicine. *Shenque* point is selected for applying drug to the umbilicus. Based on the meridian acupoint theory, sticking *shenque* point can facilitate drug's penetration into the skin so as to promote intestinal peristalsis, regulate the function of viscera, and maximize the effect of strengthening the spleen and helping the movement. *Shenque* point is located in the middle of the navel, that is, the navel of the human body. It is an important point of *Ren* meridian, which is connected with the meridians and viscera. It belongs to the place where the *chong* pulse circulates. The medicine here can regulate the gastrointestinal function. In addition, the navel is located at the last closed part of the abdominal wall, with less sub-umbilical adipose tissue and thin cuticle. The navel skin is directly connected to the fascia and peritoneum, has abundant arteriovenous and microvascular, and has good blood supply. Therefore, selecting this point for administration is conducive to the puncture, diffusion and absorption of traditional Chinese medicine components. In the application of traditional Chinese medicine, raw *Radix et Rhizoma Rhei* can be purged, attack accumulation and guide stagnation, and is suitable for the treatment of constipation, stagnation, dry gastrointestinal and damp heat. *Mirabilite* can slow down diarrhea, eliminate food, warm the center and expel water. It is suitable for the treatment of food fullness, edema, dyspepsia and constipation. *Cortex Magnoliae Officinalis* can reduce *qi* and swelling, eliminate glomus and fullness. It is suitable for the treatment of abdominal distention and constipation. *Fructus aurantii* can stagnate and reduce inflation and regulate *qi*. *Radix Aucklandiae* can strengthen the spleen, eliminate food, promote *qi* and relieve pain. *Radix Codonopsis* can tonify middle-*jiao* and *qi*. *Rhizoma Atractylodis Macrocephalae* can invigorate spleen and supplement *qi*. *Semen Persicae* can loosen bowel to relieve constipation, and promote blood circulation to remove blood stasis. *Borneol* can clear away heat and relieve pain. The combination of the above traditional Chinese medicine can moisten the intestines, help with defecation and *qi*, and their application on *shenque* point can effectively prevent and treat abdominal distention after gynecological surgery. Combined with the data analysis in this paper, the incidence of abdominal distension in group A was 22.22%, which was lower than 41.47% in group B ($P < 0.05$). The therapeutic effect of abdominal

distension in group A was 87.50%, which was higher than 66.67% in group B ($P < 0.05$). The recovery time of first defecation, first exhaust and bowel sound in group A was shorter than that in group B ($P < 0.05$). All postoperative quality of life scores of group A were higher than that of group B ($P < 0.05$). It is suggested that moxibustion and acupoint applications are effective and feasible after gynecological surgery.

In conclusion, moxibustion and acupoint application scheme can promote postoperative exhaust and defecation of patients, which is conducive to the recovery of gastrointestinal function. Therefore, this technique is worthy of popularization.

Disclosure statement

The authors declare no conflict of interest.

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