

Efficacy Observation of Spinal Pinching Therapy in Promoting Gastrointestinal Function Recovery after Gynecological Abdominal Surgery: Post-print

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Abstract

Objective To investigate the efficacy of spine pinching therapy in promoting postoperative gastrointestinal function recovery in patients undergoing gynecological abdominal surgery. **Methods** Sixty patients meeting the diagnostic criteria were randomly divided into a control group and a study group, with 30 cases in each group. The control group received routine care, while the study group received spine pinching therapy in addition to routine care. Time to first postoperative flatus, defecation, and hospital stay were compared between the two groups. **Results** There was no statistically significant difference in postoperative time to first defecation between the two groups ($P > 0.05$). The time to first flatus in the study group was shorter than that in the control group, and the difference was statistically significant ($P < 0.05$). The difference in hospital stay between the two groups was statistically significant ($P < 0.05$). **Conclusion** Spine pinching therapy can promote gastrointestinal function recovery after gynecological abdominal surgery.

Full Text

Effect of Spine Pinching Therapy on Gastrointestinal Function Recovery After Gynecological Abdominal Surgery

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Abstract

Objective: To investigate the effect of spine pinching therapy on postoperative gastrointestinal function recovery in patients undergoing gynecological abdominal surgery.

Methods: Sixty patients meeting the inclusion criteria were randomly divided into a control group and a study group, with 30 cases in each group. The control group received routine nursing care, while the study group received spine pinching therapy in addition to routine nursing. Postoperative time to first flatus, time to first defecation, and length of hospital stay were compared between the two groups.

Results: There was no significant difference in time to first defecation between the two groups ($P>0.05$). The postoperative time to first flatus in the study group was significantly shorter than that in the control group ($P<0.05$). There was a statistically significant difference in length of hospital stay between the two groups ($P<0.05$).

Conclusion: Spine pinching therapy is effective in promoting gastrointestinal function recovery after gynecological abdominal surgery.

Keywords: spine pinching therapy; gynecological abdominal operation; gastrointestinal function; postoperative recovery; Traditional Chinese Medicine nursing

Introduction

Gastrointestinal function recovery represents a critical component of perioperative rehabilitation following gynecological abdominal surgery [1]. Postoperative abdominal distension and pain are common complications that affect early feeding, nutritional supplementation, and overall recovery [2]. Early restoration of gastrointestinal function after gynecological abdominal surgery helps reduce the risk of postoperative complications and improve patient satisfaction. Previous studies have reported satisfactory therapeutic effects of spine pinching therapy in treating post-fracture patients with abdominal distension, constipation, and urinary retention [3-5]. This study investigated the effects of spine pinching therapy on postoperative gastrointestinal function recovery in gynecological abdominal surgery patients.

1. Materials and Methods

1.1 Study Population Sixty patients who underwent gynecological abdominal surgery in our department between August 2015 and June 2017 were selected as study subjects.

Inclusion Criteria: - Aged 18-60 years - Uterine and/or adnexal lesions requiring total abdominal hysterectomy and/or unilateral/bilateral adnexectomy

under general anesthesia - Good compliance

Exclusion Criteria: - Malnutrition or anemia - Skin diseases on the back unsuitable for spine pinching therapy - Constipation - Severe intestinal adhesions - Patients using gastrointestinal motility drugs or rectal tube decompression for intractable abdominal distension - Patients who had previously received spine pinching therapy

Dropout Criteria: - Inability to complete treatment until defecation and request to withdraw - Inability to accurately provide information on flatus and defecation times

The 60 eligible patients were stratified by age (with patients aged 18-60 years divided into 4 strata at 10-year intervals) and degree of intraoperative intestinal adhesions (mild and moderate, 2 strata), then dynamically randomized according to the principle of minimizing imbalance index into control and study groups. The study group comprised 30 patients aged 19-54 years (mean 39.63 ± 1.43 years), while the control group comprised 30 patients aged 22 – 60 years (mean 38.87 ± 1.72 years). There was no significant difference in age between the two groups ($P > 0.05$), indicating comparability. No cases were lost during the study. This study was approved by the hospital ethics committee, and all patients provided informed consent.

1.2 Interventions **1.2.1 Routine Nursing Care:** In both groups, responsible nurses assessed patients' nutritional status, mental state, compliance, dietary habits, bowel habits, and disease knowledge within 24 hours of admission. Psychological nursing was provided, including environmental orientation to alleviate anxiety about unfamiliar surroundings. Health education covered the significance of early postoperative flatus, indications for oral intake, and dietary precautions to avoid greasy, spicy, and gas-producing foods. Postoperative guidance included instructions on turning in bed and clockwise abdominal massage techniques for patients and their families to promote flatus.

1.2.2 Spine Pinching Therapy: The study group received spine pinching therapy in addition to routine nursing care. Patients were placed in left or right lateral position according to their condition; prone position was avoided to prevent wound pain. The specific techniques included:

- **Rolling-pinching:** The practitioner used the radial side of the thumb to press against the skin, with the index and middle fingers pressing forward. All three fingers simultaneously grasped and lifted the skin in a regular pattern, creating a “spring-like” sensation.
- **Rolling-pinching with separation:** Based on rolling-pinching, the fingers simultaneously separated to both sides to enhance the effect.
- **Clamping-pinching:** The index and middle fingers were curved like pincers to regularly apply pressure and release along the Governor Vessel and Bladder meridian, moving upward or downward according to the disease condition.

The “pinch-three-lift-one” method (pinching three times then lifting once) was commonly applied, though variations like “pinch-five-lift-one” or simple pinching without lifting were also used. During the procedure, specific acupoints on the Bladder meridian such as Feishu (BL13), Pishu (BL20), and Shenshu (BL23) were targeted to enhance clinical effects for abdominal distension and constipation. The manipulation required appropriate force, starting gently and gradually increasing to the maximum tolerable level for the patient. The technique should be neither too tight nor too loose to facilitate smooth advancement and rotation along a straight line along the spine, avoiding deviation. Patient comfort and privacy were prioritized, with continuous observation and communication during the procedure.

Therapy was initiated 6 hours postoperatively, administered twice daily for 20 minutes per session, and continued until the first passage of flatus and defecation.

1.3 Outcome Measures and Statistical Analysis Time to first flatus, time to first defecation, and actual length of hospital stay were recorded and compared between groups.

Statistical analysis was performed using GraphPad Prism software. Measurement data were expressed as mean±standard deviation ($\bar{x}\pm s$). Normally distributed data were analyzed using t-tests, while non-normally distributed data were analyzed using non-parametric tests. The significance level was set at $\alpha=0.05$, with $P<0.05$ considered statistically significant.

2. Results

There was no significant difference in postoperative time to first defecation between the two groups ($P>0.05$). However, the study group demonstrated significantly shorter time to first flatus compared with the control group ($P<0.05$). The control group had a mean hospital stay of 8.17 days, while the study group had a mean of 11.57 days, with this difference being statistically significant ($P<0.05$).

Table 1 Comparison of postoperative time to first flatus and defecation between groups ($\bar{x}\pm s$)

3. Discussion

Spine pinching therapy is a traditional Chinese therapeutic method originally used to treat pediatric digestive diseases known as “Gan Ji” (infantile malnutrition and indigestion), hence also called “pinching accumulation therapy.” Increasingly applied in adult conditions such as asthma, dysmenorrhea, vomiting, and insomnia, this therapy primarily involves manual manipulation along the spine and its surrounding tissues. The theoretical basis stems from the close relationship between the spine, its associated structures, and certain meridians

and viscera. Pathological changes in the spine can affect meridians and viscera, and vice versa [7].

The Governor Vessel runs along the midline of the spine, while the Bladder meridian runs 1.5 inches lateral to the spine. Pinching and lifting along the Governor Vessel helps regulate yang qi throughout the body and connect yin qi, unblocking meridians and promoting smooth qi and blood flow. Simultaneously, stimulating the Bladder meridian can regulate qi-blood and visceral function. This therapy harmonizes yin-yang, strengthens the spleen and stomach, unblocks meridians, activates blood circulation, and supports upright qi. As a form of Traditional Chinese Medicine massage, spine pinching therapy requires treatment based on syndrome differentiation. Different back-shu points are targeted according to the condition to enhance therapeutic effects [8,9]. For abdominal distension and constipation, pinching Weishu (BL21), Dachangshu (BL25), and Ganshu (BL18) can improve visceral physiological function and promote gastrointestinal motility.

Modern medicine suggests that the autonomic nerves regulating visceral function are primarily distributed along the spine. Spine pinching therapy provides mechanical stimulation to the skin along both sides of the spine, eliciting beneficial physiological, biochemical, and neurohumoral responses through the nervous, endocrine, immune, and circulatory systems, thereby promoting gastrointestinal function recovery [13]. This study found no significant difference in time to first defecation between groups ($P>0.05$), possibly due to confounding factors such as dietary structure, fluid intake, physical regulation, emotional state, and age-related immune function that were not controlled for, combined with the small sample size. However, the significantly shorter time to first flatus in the study group demonstrates that spine pinching therapy promotes postoperative gastrointestinal function recovery, supported by relevant Traditional Chinese Medicine theory and previous research [14-16].

Early gastrointestinal recovery enables early feeding and mobilization, facilitating nutritional therapy, reducing complications, and promoting recovery. During therapy implementation, patient privacy should be protected, with attention to warmth and minimizing exposure, especially in winter. Continuous communication and observation are essential, with immediate cessation if discomfort such as palpitations or pain occurs. Spine pinching therapy can shorten time to flatus, reduce patient suffering, decrease complication risk, and promote postoperative rehabilitation, providing greater patient benefit. Although the therapy increases nursing workload, achieving better therapeutic outcomes and greater patient benefit aligns with the principle of patient-centered, high-quality nursing care.

While clockwise abdominal massage is commonly used for postoperative distension, patients often resist due to pain. Early ambulation is limited by indwelling catheters, and acupuncture requires specialized supervision and may cause discomfort. Spine pinching therapy, as an essence of Traditional Chinese Medicine, offers advantages of simple operation, non-invasiveness, minimal side effects,

and opportunities for close communication and psychological care, effectively integrating Chinese and Western nursing approaches. However, contrary to expectations, the study group had longer hospital stays. Further investigation and telephone follow-up revealed that the study group had a higher proportion of patients from outside Beijing who preferred to stay 2-3 additional days for recovery consolidation and experienced transportation delays. This suggests the difference in hospital stay was unrelated to the intervention itself.

Conflict of Interest Statement: The authors declare no conflicts of interest.

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