

Mild moxibustion for the prevention and treatment of bladder spasms after transurethral resection of the prostate

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Abstract

Objective: To observe the therapeutic effect of mild moxibustion on preventing and treating bladder spasms after transurethral resection of the prostate. **Method:** The control group patients were given routine perioperative care, while the experimental group patients were given mild moxibustion on Taixi, Zhongji, Qihai, and Shenque points in addition to routine perioperative care. **Result:** The frequency of bladder spasms, degree of pain, and degree of bladder spasms in the experimental group were significantly better than those in the control group, and the differences were statistically significant ($P < 0.05$). **Conclusion:** Mild moxibustion is safe and reliable in preventing and treating bladder spasms after transurethral resection of the prostate.

Keywords Mild moxibustion; bladder spasms; Taixi point; transurethral resection of the prostate

1 Introduction

Bladder spasm is a common postoperative complication of urological diseases, characterized by paroxysmal abdominal spasms, perineal pain, and urgency during urination, with intervals ranging from minutes to hours.[1] About 40% of postoperative patients with urological diseases experience symptoms of bladder spasms. This symptom seriously affects the postoperative experience of patients and is not conducive to rapid postoperative recovery. How to reduce the incidence or severity of bladder spasms is a hot research topic in the industry. The commonly used treatment methods for bladder spasms include M-receptor antagonists, nonsteroidal anti-inflammatory drugs, opioid drugs, and patient-controlled analgesia therapy.[2] However, the above-mentioned methods for preventing and treating bladder spasms have drawbacks such as uncertain efficacy and adverse reactions. Therefore, there is an urgent need for a method with fewer adverse reactions and definite therapeutic effects in clinical practice to prevent and treat postoperative bladder spasms.

In recent years, mild moxibustion has been widely used as a non-invasive treatment method in relieving pelvic floor functional pain, delaying disease progression, and promoting postoperative recovery.[3-4] This method uses gentle moxibustion to stimulate and excite the corresponding nerves or muscles, thereby achieving the goal of relieving pain and treating symptoms. The effectiveness of using acupoints to treat bladder spasms has been experimentally proven, including external application of traditional Chinese medicine acupoints, acupoint electroacupuncture stimulation, and moxibustion, all of which have achieved good therapeutic effects.

2 Method

2.1 Patient selection

Inclusion criteria: (1) Patients with benign prostatic hyperplasia (BPH) who underwent transurethral resection of the prostate; (2) Can cooperate to complete gentle moxibustion operations.

Exclusion criteria: (1) Lower urinary tract infection or other urinary tract infections; (2) Urinary incontinence or neurogenic bladder; (3) Patients with bladder bleeding; (4) Bladder fistula surgery, the latter; (5) Other systemic diseases.

2.2 Treatment process

The control group patients were given routine perioperative care (sufficient communication with patients before surgery to reduce their nervousness, postoperative maintenance of flushing fluid temperature between 20 °C and 30 °C, postoperative placement of a super smooth three chamber balloon catheter, and reduction of bladder irritation caused by moving and pulling the catheter), and patients with bladder spasms were treated with traditional drugs. On the basis of routine perioperative care (as mentioned above), patients in the experimental group were given mild moxibustion on Taixi, Zhongji, Qihai, and Shenque acupoints. They were used on the day

after surgery to observe the occurrence of postoperative bladder spasms. Apply mild moxibustion treatment to patients with postoperative bladder spasms and observe the therapeutic effect.

2.3 Evaluation criteria

Evaluate the frequency of bladder spasms, degree of pain, and degree of bladder spasms in two groups of patients. The degree of pain was evaluated using visual analog scale (VAS) for scoring. Assessment of Bladder Spasm Degree: Record the frequency of bladder spasms, degree of urinary intention, and overflow of urine around the catheter to evaluate the patient's multiple scores. Record the bladder spasm degree scores on the day of surgery and for three consecutive days after surgery.

3 Result

Comparing the occurrence of bladder spasms on the day after surgery between the control group and the experimental group BPH patients, it was found that the median frequency of bladder spasms in the control group BPH patients was 0 (0,2.25), with a median VAS score of 4 (3,6) points and a median bladder spasticity score of 0 (0,6) points. The median frequency of bladder spasms in patients with benign prostatic hyperplasia in the experimental group was 0 (0,0), the median VAS score was 3 (3,4) points, and the degree of bladder spasms was 0 (0,0) points. After comparison, the frequency of bladder spasms ($Z=-2.13$, $P=0.03$), VAS score ($Z=-2.22$, $P=0.02$), and bladder spasticity score ($Z=-1.99$, $P=0.04$) of the two groups of BPH patients were significantly better in the experimental group than in the control group, and the differences were statistically significant ($P<0.05$).

Table 1: Incidence of postoperative bladder spasms in two groups of BPH patients

Group	N	The frequency of bladder spasms	Vas score	Degree of bladder spasms score
control group	158	0 (0, 2.25)	4 (3, 6)	0 (0, 6)
experimental group	161	0 (0, 0)	3 (3, 4)	0 (0, 0)
<i>Z</i>		-2.13	-2.22	-1.99
<i>P</i>		0.03	0.02	0.04

Compared with control group, * $P<0.05$.

Compare the occurrence of bladder spasm on the day after BPH surgery in the experimental group with that on the first day after surgery. The average occurrence of bladder spasms in the experimental group of BPH patients after treatment was (0.02 ± 0.23), with a VAS score of (2.82 ± 0.12) and a bladder spasticity degree score of (0.16 ± 0.08). After comparison, the frequency of bladder spasms ($t=2.05$, $P=0.04$), VAS score ($t=3.98$, $P<0.01$), and degree of bladder spasms ($t=2.04$, $P=0.04$) in the experimental group of BPH patients before and after treatment were significantly better than before treatment, and the differences were statistically significant ($P<0.05$).

Table 2: Incidence of bladder spasms
in experimental group BPH patients before and after treatment

Group	N	The frequency of bladder spasms	Vas score	Degree of bladder spasms score
Before treatment	161	0.36±0.17	3.48±0.19	0.82±0.39
After treatment	161	0.02±0.23	2.28±0.12	0.16±0.08
t		2.05	3.98	2.04
P		0.04	<0.01	0.04

Compared with before treatment, *P<0.05, **P<0.01.

4 Discussion

During transurethral resection of the prostate, a large amount of thermal energy and bleeding are generated due to the electrocautery. A large amount of low-temperature saline is needed to rinse to cool the thermal energy generated by the electric knife and maintain a clear surgical field. After the surgery, continuous bladder irrigation is still needed to achieve low-temperature hemostasis and prevent blood clots from blocking the urinary tract. This can take away a large amount of heat, damage the yang energy, and patients often experience shivers throughout the body. Prostate electrocautery patients are mostly elderly and physically weak, with kidney yang deficiency being more common. Low temperature saline bladder irrigation can exacerbate yang deficiency, causing the bladder to become cold and lose its warmth, leading to frequent bladder spasms. After surgery, the blood vessels are damaged, blood overflows outside the veins, blood stasis blocks, and the urinary tract is blocked. If not, pain occurs. Taixi point is the original point of the kidney meridian, which can nourish yin and tonify the kidney. Acupuncture at Taixi point can regulate the parasympathetic, sympathetic, and central nervous systems of patients, allowing smooth muscle relaxation of the bladder and prostate, and alleviating symptoms of frequent urination and urgency. The stimulating effect of mugwort fire or its combustion products on the human meridian system has biological effects such as promoting meridians and activating collaterals, promoting blood circulation and removing stasis, dispersing nodules and resolving phlegm. It is also known as the warming effect of moxibustion, which means it does not cause pain. Therefore, we gently moxibustion on the Taixi acupoint to warm the meridians and stop bleeding, dispel cold and relieve pain, dispel the evil of yin and cold, harmonize qi and blood, stretch the yang qi, and unblock the fu qi.

Bladder spasms, as a common postoperative complication of prostate and bladder diseases, are crucial for the recovery of patients through prevention and treatment. At present, there are many methods for the prevention and treatment of bladder spasms, including psychological support, flushing the bladder with warm physiological saline, and medication treatment. Among them, drugs have been widely used in clinical practice as fast acting and significantly effective regimens, but drugs often come with side effects and adverse reactions during the application process. Therefore, there is an urgent need for a method with fewer adverse reactions and definite therapeutic effects in clinical practice to prevent and treat bladder spasms after BPH surgery.

Our use of mild moxibustion to prevent and treat bladder spasms in postoperative BPH patients is effective and practical. Compared to other treatment methods, mild moxibustion reduces the side effects of drugs on the digestive and nervous systems; The process oriented and standardized operation method is simpler and more convenient, while reducing the workload of medical staff. Therefore, mild moxibustion can be widely used in clinical practice as a safe, convenient, and effective means of preventing and treating bladder spasms, and promoted in grassroots hospitals.

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References

- [1] Zeng XT, Jin YH, Liu TZ, et al. Clinical practice guideline for transurethral plasmakinetic resection of prostate for benign prostatic hyperplasia (2021 Edition), *Mil Med Res*, 2022, 9(1):14.
- [2] Yang BS, Ye DW, Yao XD, et al. The study of electrical acupuncture stimulation therapy combined with pelvic floor muscle therapy for postprostatectomy incontinence, *Zhonghua Wai Ke Za Zhi*, 2010, 48(17):1325-7.
- [3] Li MF, Lv JM, Zhao LF, et al. Different needling depth for benign prostatic hyperplasia: a randomized controlled trial, *Zhongguo Zhen Jiu*, 2020, 40(10):1071-5.
- [4] Zhong TH, Zhao JP, Qin JX, et al. Study on positive reaction of foot three yin-meridians in patients with type III chronic prostatitis based on meridian diagnosis, *Zhongguo Zhen Jiu*, 2022, 42(10):1131-5.

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