

Efficacy of Traditional Chinese Medicine Soaking Combined with Acupoint Moxibustion for Postoperative Numbness in Lumbar Disc Herniation Patients After Transforaminal Endoscopic Surgery

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Abstract: *Objective:* To observe the intervention effect of traditional Chinese medicine (TCM) soaking combined with acupoint moxibustion on patients' numbness symptoms after percutaneous endoscopic lumbar discectomy for lumbar disc herniation. *Methods:* A total of 80 patients with lumbar disc herniation who underwent transforaminal endoscopic surgery in our hospital from January 2023 to January 2024 and experienced numbness after the operation were selected. They were divided into an observation group (40 cases) and a control group (40 cases) using a random number table method. Both groups received conventional nursing care, including bed rest and oral methylcobalamin. The control group received no additional intervention beyond this conventional care, while the observation group received additional intervention of TCM soaking combined with acupoint moxibustion on the basis of basic nursing care. The course of treatment was 1 week for both groups. The numbness Visual Analogue Scale (VAS) score, Japanese Orthopaedic Association (JOA) lumbar function score, and clinical efficacy were compared between the two groups. *Results:* Before intervention, there were no statistically significant differences in numbness VAS score and JOA score between the two groups ($P > 0.05$). After 3 days and 1 week of intervention, the numbness VAS score of the observation group was significantly lower than that of the control group ($P < 0.05$). After 1 week of intervention, the JOA score of the observation group was significantly higher than that of the control group ($P < 0.05$), and the total effective rate (92.5%) was significantly higher than that of the control group (67.5%) ($P < 0.05$). No serious adverse reactions occurred in either group. Regarding quantitative efficacy indicators, the relative risk of ineffective outcomes in the observation group was 0.23 (95% CI: 0.08–0.68), and the absolute risk reduction of ineffective outcomes was 25.0% (95% CI: 10.2–39.8), further confirming the superiority of the combined therapy. *Conclusion:* TCM soaking combined with acupoint moxibustion can effectively reduce the degree of numbness in patients after transforaminal endoscopic surgery, improve lumbar nerve function, and has high safety, which is worthy of clinical promotion and application.

Keywords: Transforaminal endoscopic surgery; Postoperative numbness; Traditional Chinese medicine soaking; Acupoint moxibustion; Clinical efficacy

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1. Introduction

Percutaneous endoscopic foraminal discectomy (PEFD) is a commonly used minimally invasive surgical method for the treatment of spinal diseases such as lumbar disc herniation. It can effectively relieve the compression of the nerve root by the herniated intervertebral disc, and has the advantages of small trauma, fast recovery, and low incidence of perioperative complications^[1]. However, clinical follow-up shows that 30–50% of patients still have residual numbness in the lower limbs after surgery, which can last for 2–12 weeks, and in severe cases, it can even be prolonged to 6 months^[2]. This symptom not only prolongs the patient's recovery period but also significantly reduces their daily living ability and quality of life, becoming a key factor affecting the overall efficacy of the surgery^[3].

The pathogenesis of postoperative numbness is complex. Modern medicine believes that it is mainly related to intraoperative nerve traction, inflammatory reaction caused by local bleeding, nerve root edema, and microcirculation disturbance^[4]. The released inflammatory factors (such as interleukin-6, tumor necrosis factor- α) will further damage the nerve myelin sheath and affect the nerve conduction function, eventually manifesting as numbness symptoms^[5]. At present, the clinical intervention methods mainly include oral neurotrophic drugs (such as methylcobalamin), but single methylcobalamin has a limited effect on improving local microcirculation, and the symptom relief effect is not good in some patients; physical therapy is also limited by equipment and treatment cycle, making it difficult to achieve personalized intervention^[6].

From the perspective of traditional Chinese medicine (TCM), postoperative numbness after transforaminal endoscopic surgery belongs to the categories of “bi syndrome” and “blood stasis syndrome” in TCM, and the core pathogenesis is “meridian blockage and qi-blood deficiency.” Surgical trauma damages the local meridians, qi, and blood, leading to qi stagnation and blood stasis; qi and blood cannot nourish the nerve and muscle tissues, and then the manifestation of “blockage leading to numbness and deficiency leading to tingling” appears^[7]. TCM external treatment has unique advantages in the treatment of this symptom. TCM soaking dredges the meridians and promotes blood circulation to remove blood stasis through the effects of heat and drug penetration; acupoint moxibustion regulates the operation of qi and blood by stimulating specific acupoints. The combination of the two can form a synergistic effect and enhance the therapeutic effect^[8].

Existing studies have confirmed that single TCM soaking or acupoint moxibustion has an improving effect on postoperative numbness^[9,10], but there is still a lack of systematic research on the combined application of the two in postoperative numbness after percutaneous endoscopic lumbar discectomy for lumbar disc herniation. This study verified the efficacy and safety of TCM soaking combined with acupoint moxibustion through a randomized controlled design, providing an evidence-based basis for the clinical promotion of this combined therapy.

2. Materials and methods

2.1. Subjects

A total of 80 patients with lumbar disc herniation who developed numbness symptoms after transforaminal endoscopic surgery and were admitted to the First Department of Spine Surgery, Wuhu Traditional Chinese Medicine Hospital, Affiliated Hospital of TCM College, from January 2023 to January 2024 were selected. The inclusion and exclusion criteria were formulated with reference to the *Guidelines for the Diagnosis and Treatment of Lumbar Disc Herniation (2022 Edition)*^[11] and the *Research Standards for TCM External Treatment*^[12].

Inclusion criteria: (1) Preoperative diagnosis of lumbar disc herniation by MRI/DR, and undergoing transforaminal endoscopic nucleotomy; (2) Numbness in the lower limbs or waist occurred within 24 hours after

surgery, and the numbness VAS score was ≥ 3 points; (3) Aged 35–65 years old (the physical state of middle-aged people is relatively stable, which can reduce the interference of age-related factors on the efficacy); (4) Voluntarily participated in this study and signed the informed consent form (this study was approved by the Medical Ethics Committee of Wuhu Traditional Chinese Medicine Hospital, approval number: KY-2023-036).

Exclusion criteria: (1) Complicated with severe heart, liver, kidney dysfunction, coagulation dysfunction, or malignant tumor; (2) Skin damage or infection at the numbness site, or a history of allergy to TCM ingredients (such as *Angelica pubescens*, *Notopterygium incisum*) or moxibustion; (3) Severe nerve damage (such as muscle strength \leq grade 3) or combined with other spinal diseases (such as spinal stenosis, lumbar spondylolisthesis); (4) Poor compliance (such as inability to complete the 1-week course of treatment) or mental disorders, which affect the outcome evaluation.

The sample size was determined based on previous studies on TCM interventions for postoperative numbness^[9,10]. Taking the numbness Visual Analogue Scale (VAS) score as the primary outcome indicator, we set the significance level (α) at 0.05, power ($1-\beta$) at 0.8, and expected effect size between the two groups at 0.8. Using PASS 15.0 statistical software for calculation, the minimum required sample size was 34 cases per group. Considering a potential dropout rate of 18%, we finally enrolled 80 patients, with 40 cases in each group to ensure sufficient statistical power.

SPSS 26.0 software was used to generate a random number table, and the patients were divided into an observation group and a control group, with 40 cases in each group. Outcome assessors (responsible for evaluating numbness VAS scores and JOA scores) were blinded to the grouping of patients. They had no access to information about which group (observation or control) each patient belonged to, nor did they participate in the implementation of TCM soaking or acupoint moxibustion, to avoid measurement bias.

2.2. Intervention materials

TCM soaking prescription: It consists of 10 g of *Notopterygium incisum*, 15 g of *Angelica pubescens*, 10 g of *Gentiana macrophylla*, 15 g of *Cyathula officinalis*, 15 g of *Paeonia lactiflora*, 15 g of Sappan wood, etc. All TCM decoction pieces meet the standards of the Pharmacopoeia of the People's Republic of China (2020 Edition) and are provided by the in-hospital preparations of Wuhu Traditional Chinese Medicine Hospital (production date: 20221118).

Moxibustion materials: Pure moxa sticks (specification: 25 mm \times 200 mm, moxa wool purity \geq 90%, produced by Wuhu Traditional Chinese Medicine Hospital, production date: 20221004), single-hole moxibustion boxes (Hebei Zaoqiang Tiankang Medical Co., Ltd.).

2.3. Intervention methods

Both groups received a 1-week intervention with the same conventional nursing plan, which included three aspects: postoperative position guidance (mainly lying flat within 1–3 days after surgery, with gradual increase in turning over and sitting time, each not exceeding 30 minutes), neurotrophic treatment (oral methylcobalamin tablets, 0.5 mg each time, three times a day, produced by Harbin Sanlian Pharmaceutical Co., Ltd., batch number: 2402281L), and health education (informing patients to avoid bending over, lifting heavy objects, and prolonged sitting positions during the treatment period). The control group only received the above conventional nursing care, while the observation group was additionally given the intervention of TCM soaking combined with acupoint moxibustion on the basis of conventional nursing care, with the operation performed by TCM nurses holding TCM

professional training certificates (who received unified training before the study to ensure standardized operation). For TCM soaking, the preparation process involved adding 2,000 mL of distilled water to TCM Fumigation and Soaking No.1 and soaking it in 80°C hot water for 30 minutes to fully moisten the medicinal materials; during the operation, TCM Fumigation and Soaking No.1 was cooled to 38–42°C with 2,000 mL of distilled water (the temperature was tested with a water thermometer to avoid scalding), and the numb parts (lower limbs: from ankle joint to knee joint; waist: local area around the surgical incision) were soaked for 30 minutes each time, once a day, for 1 week, with the note that if the temperature of the soaking solution dropped during the process, pre-prepared hot water should be added to maintain the temperature at 38–42°C. Acupoint moxibustion was conducted 30 minutes after TCM soaking to avoid excessive skin moisture affecting the moxibustion effect; for acupoint selection, 3–4 acupoints were chosen each time based on TCM meridian theory and clinical experience^[13], For L4/5 segment-related numbness (in the anterolateral lower leg, dorsum of the foot, and the great toe), choose Zusanli (ST36), Yanglingquan (GB34), and Jiexi (ST41). For L5/S1 segment-related numbness (in the posterolateral lower leg, lateral dorsum of the foot, and plantar surface of the foot), select the distal acupoints Chengshan (BL57), Kunlun (BL60), and Yongquan (KI1) to dredge the meridians of the lower limbs; during the operation, the ignited moxa stick was fixed in a moxibustion box, which was then placed on the selected acupoints, with the distance between the moxa stick and the skin maintained at 2–3 cm (to the extent that the patient felt warm without burning pain), and each acupoint was moxibusted for 15 minutes, once a day, for 1 week.

2.4. Observation indicators

2.4.1. Primary outcome indicators

Degree of numbness: The numbness VAS^[14] was used, with a scoring range of 0–10 points: 0 point = no numbness; 1–3 points = mild numbness (does not affect daily activities); 4–6 points = moderate numbness (slightly affects daily activities); 7–10 points = severe numbness (seriously affects daily activities). Evaluations were conducted before intervention, 3 days after intervention, and 1 week after intervention.

Lumbar nerve function: The Japanese Orthopaedic Association (JOA) lumbar function score^[15] was used, with a full score of 29 points, including subjective symptoms (low back pain, lower limb pain/numbness, 9 points), objective signs (muscle strength, sensory disturbance, 14 points), and daily activity ability (6 points). A higher score indicates better nerve function. Evaluations were conducted before intervention and 1 week after intervention.

2.4.2. Secondary outcome indicators

Clinical efficacy: It was determined 1 week after intervention, with reference to the *Guiding Principles for Clinical Research of New Chinese Medicines (2020 Edition)*^[16]:

Markedly effective: Numbness VAS score decreased by $\geq 70\%$, and JOA score increased by $\geq 50\%$;

Effective: Numbness VAS score decreased by 30–69%, and JOA score increased by 20–49%;

Invalid: Failed to meet the above standards.

Total effective rate = (number of markedly effective cases + number of effective cases) / total number of cases $\times 100\%$.

2.4.3. Safety indicators

Adverse reactions: The occurrence of adverse reactions during the intervention period, such as skin redness,

scalding, allergy (rash, itching), gastrointestinal discomfort, etc., was recorded, and the correlation between adverse reactions and intervention measures was analyzed.

2.5. Statistical methods

All data were processed using SPSS 26.0 statistical software. Measurement data (numbness VAS score, JOA score) were expressed as mean \pm standard deviation (SD). Paired *t*-test was used for comparison before and after intervention within the group, and independent sample *t*-test was used for comparison between groups; count data (gender, clinical efficacy, adverse reactions) were expressed as cases (%), and comparison was conducted using χ^2 test; repeated-measures analysis of variance was used for comparison of numbness VAS scores at different time points (before intervention, 3 days after intervention, 1 week after intervention). A *P*-value of < 0.05 was considered statistically significant.

3. Results

3.1. Comparison of baseline data between the two groups

There were no statistically significant differences in general data (age, gender, surgical segment), numbness-related indicators (numbness site, pre-intervention numbness VAS score), and lumbar function (pre-intervention JOA score) between the two groups ($P > 0.05$), indicating that the two groups were comparable (Table 1).

Table 1. Comparison of baseline data between the two groups

Indicators	Observation group (<i>n</i> = 40)	Control group (<i>n</i> = 40)	<i>t</i> / χ^2 value	<i>P</i> value
Age	48.6 \pm 7.2	47.8 \pm 6.9	0.482	0.631
Gender			0.102	0.749
-Male	22 (55.0)	23 (57.5)		
-Female	18 (45.0)	17 (42.5)		
Surgical segment			0.356	0.551
L4/5	25 (62.5)	27 (67.5)		
L5/S1	15 (37.5)	13 (32.5)		
Numbness site			0.289	0.591
-Anterolateral lower leg and great toe of the foot	32 (80.0)	30 (75.0)		
-Posterolateral lower leg and lateral dorsum of the foot	8 (20.0)	10 (25.0)		
Pre-intervention numbness VAS score	5.8 \pm 1.2	5.6 \pm 1.3	0.654	0.515
Pre-intervention JOA score	14.2 \pm 2.3	13.9 \pm 2.5	0.568	0.571

Note: The results are presented as mean \pm standard deviation (SD).

3.2. Comparison of numbness VAS scores between the two groups

Before intervention, there was no statistically significant difference in numbness VAS score between the two groups ($P > 0.05$); after 3 days and 1 week of intervention, the numbness VAS scores of both groups were significantly lower than those before intervention ($P < 0.05$), and the scores of the observation group at the same time points were significantly lower than those of the control group ($P < 0.05$). Repeated-measures analysis of

variance showed that there was an interaction effect between “group” and “time” ($F = 28.63, P < 0.001$), indicating that with the extension of treatment time, the intervention effect of the observation group was more significant (Table 2).

Table 2. Comparison of numbness VAS scores between the two groups

Group	Number of patients	Before intervention	3 days after intervention	1 week after intervention
Observation group	40	5.8 ± 1.2	3.2 ± 0.9	1.5 ± 0.6
Control group	40	5.6 ± 1.3	4.5 ± 1.1	3.1 ± 0.8
<i>t</i> value	-	0.654	5.872	9.836
<i>P</i> value	-	0.515	< 0.001	< 0.001

Note: The results are presented as mean ± standard deviation (SD); Compared with the same group at the same time point, $P < 0.05$; compared with the control group at the same time point, $P < 0.05$.

3.3. Comparison of JOA scores between the two groups

Before intervention, there was no statistically significant difference in JOA score between the two groups ($P > 0.05$); after 1 week of intervention, the JOA scores of both groups were significantly higher than those before intervention ($P < 0.05$), and the score of the observation group was significantly higher than that of the control group ($P < 0.05$), indicating that the combined therapy had a better effect on improving lumbar nerve function (Table 3).

Table 3. Comparison of JOA scores between the two groups

Group	Number of patients	Before intervention	1 week after intervention	Intra-group <i>t</i> value	Intra-group <i>P</i> value	Inter-group <i>t</i> value	Inter-group <i>P</i> value
Observation group	40	14.2 ± 2.3	21.5 ± 2.6	14.321	< 0.001	11.256	< 0.001
Control group	40	13.9 ± 2.5	17.8 ± 2.4	7.653	< 0.001	-	-

Note: The results are presented as mean ± standard deviation (SD).

3.4. Comparison of clinical efficacy between the two groups

After 1 week of intervention, the total effective rate of the observation group was 92.5% (37/40), which was significantly higher than 67.5% (27/40) of the control group, and the difference was statistically significant ($P < 0.05$). From the perspective of efficacy classification, the number of markedly effective cases in the observation group (20 cases, 50.0%) was significantly more than that in the control group (11 cases, 27.5%), indicating that the combined therapy had a more significant effect on relieving numbness symptoms (Table 4).

Table 4. Comparison of clinical efficacy between the two groups

Group	Number of patients	Markedly effective	Effective	Invalid	Total effective rate	χ^2 value	<i>P</i> value
Observation group	40	20 (50.0)	17 (42.5)	3 (7.5)	37 (92.5)	7.439	0.006
Control group	40	11 (27.5)	16 (40.0)	13 (32.5)	27 (67.5)	-	-

3.5. Safety evaluation

During the 1-week intervention, no serious adverse reactions (such as severe skin allergy, scalding, gastrointestinal bleeding) occurred in either group. In the observation group, 2 patients (5.0%) had slight redness of the skin at

the soaking site during the first 3 days of intervention, and the symptom was relieved after adjusting the soaking temperature from 42°C to 39°C; no other adverse events occurred. No adverse reactions related to the intervention occurred in the control group.

4. Discussion

Postoperative numbness after transforaminal endoscopic surgery for lumbar disc herniation is a common problem that troubles patients and clinicians, and its core pathological link is “delayed nerve repair.” Although the surgery relieves the mechanical compression of the nerve root, intraoperative nerve traction, local bleeding, and inflammatory reaction can still cause secondary damage to the nerve tissue, including myelin sheath degradation, axon edema, and local blood supply reduction^[17]. Modern medicine mainly uses methylcobalamin to promote the synthesis of nerve myelin sheath, but this drug only acts on the nerve repair process and has no obvious regulatory effect on local microcirculation and inflammatory reaction, so the efficacy is limited in some patients^[18].

Based on TCM theory, this study adopted the intervention of TCM soaking combined with acupoint moxibustion and achieved significant effects: the numbness VAS score of the observation group decreased more significantly, the JOA score increased more obviously, and the total effective rate reached 92.5%, which was 25 percentage points higher than that of the control group. The mechanism of action of this combined therapy can be analyzed from the following three aspects.

4.1. Mechanism of action of TCM soaking: “Heat + drug penetration” to dredge meridians and promote blood circulation to remove blood stasis

The TCM soaking prescription used in this study is a classic prescription formulated based on the TCM theory of “warming the meridians and activating blood circulation.” The compatibility of various medicinal materials has clear efficacy directions and action targets: among them, *Notopterygium incisum* and *Angelica pubescens* are the monarch drugs for warming the meridians and dispelling cold. The characteristic volatile components contained in them can significantly enhance biological activity under warm conditions, lay a blood flow foundation for subsequent drug component penetration and tissue repair by dilating local microvessels and improving skin microcirculation perfusion^[19]; *Cyathula officinalis*, *Paeonia lactiflora*, and Sappan wood are the minister drugs for promoting blood circulation and removing blood stasis, which reduce nerve root edema and local inflammatory infiltration from the source and remove pathological obstacles for nerve function recovery^[20]; *Angelica pubescens* and *Cyathula officinalis* also have the effects of dispelling wind-dampness and dredging meridians. The alcohol-soluble components contained in them (such as osthole in *Angelica pubescens* and oleanolic acid in *Cyathula officinalis*) can penetrate the subcutaneous tissue through the skin stratum corneum barrier and act directly on the local area of the damaged nerve. They accelerate the repair and regeneration of the damaged nerve myelin sheath by promoting the proliferation of Schwann cells and regulating the expression of myelin basic protein (MBP)^[21].

In addition, the thermal effect of the soaking solution, as an important physical intervention factor, can synergistically enhance the drug efficacy from two aspects: first, the warm environment can change the lipid arrangement structure of the skin stratum corneum, reduce the transdermal transport resistance of drugs, and significantly improve the transdermal absorption efficiency and bioavailability of various active components in the prescription; second, thermal stimulation can activate the aerobic metabolism pathway of local tissues, accelerate the clearance of inflammatory metabolites such as lactic acid and histamine, correct the ischemic and

hypoxic microenvironment of nerve tissue caused by microcirculation disturbance, and provide suitable metabolic conditions for the functional recovery of nerve cells [22]. This dual-action mode of “pharmaceutical chemical effect + physical thermal effect” forms a therapeutic mechanism of synergistic effect, and its intervention effect is significantly better than the chemical therapeutic effect of a single drug. It should be noted that the above molecular mechanisms are inferred from existing literature [19,21] and not directly verified by molecular marker detection in this study.

4.2. Mechanism of action of acupoint moxibustion: “Acupoint stimulation” to regulate the operation of qi and blood

The acupoints selected in this study are closely related to the meridians to which the numbness symptoms belong: Jiexi (ST41), belonging to the Stomach Meridian of Foot-Yangming, can dredge the meridian qi of the lower limbs; moxibustion at this acupoint promotes the circulation of qi and blood in the dorsum of the foot and lower leg, alleviates numbness, and regulates the local meridian qi [23]. Another key acupoint of the Stomach Meridian is Zusanli (ST36), which serves as the He-Sea Point—it can replenish qi and nourish blood, providing long-term nutritional support for nerve tissue [24]. Yanglingquan (GB34), the Jing-Well Point of the Gallbladder Meridian, functions to soothe the liver and benefit the tendons, while Chengshan (BL57) improves the qi and blood circulation in the posterior side of the lower leg to relieve local numbness. For the Bladder Meridian of Foot-Taiyang, Kunlun (BL60) is effective in dredging meridian qi, unblocking collaterals to relieve pain, and has a certain effect on numbness in the lateral dorsum of the foot and posterior side of the lower leg. Additionally, Yongquan (KI1), the primary acupoint of the Kidney Meridian, possesses the effects of nourishing yin and tonifying the kidney; moxibustion here promotes the circulation of qi and blood in the plantar surface of the foot, further reducing numbness.

The thermal stimulation of moxibustion can activate the “acupoint-specific effect”—it not only promotes the local blood circulation of the acupoints, but also regulates the functional state of the corresponding meridians through the “meridian system” to achieve the overall regulation of “qi and blood operation” [25]. Animal experiments have confirmed that moxibustion at Zusanli can increase the expression of vascular endothelial growth factor (VEGF) in local tissues, promote the formation of capillaries, and improve the blood supply of nerve tissue [26]. The regulatory effect of moxibustion on vascular endothelial growth factor (VEGF) expression and capillary formation mentioned above is inferred from previous animal experimental studies [26], and has not been confirmed by the detection of VEGF levels in patients in this study.

4.3. Synergistic effect of combined therapy: “Point-surface combination” to enhance efficacy

The combination of TCM soaking and acupoint moxibustion forms a “point-surface combination” treatment mode: TCM soaking acts on the entire numb area (“surface”), improves the overall microcirculation, and reduces the scope of numbness; acupoint moxibustion acts on specific acupoints (“points”), regulates meridian qi, and enhances the local treatment effect [27]. The two complement each other’s advantages: the thermal effect of soaking opens the skin pores, creating conditions for the thermal and meridian qi conduction of moxibustion; the regulatory effect of moxibustion on meridians promotes the absorption and transport of TCM soaking drug components, forming a synergistic effect of “1+1 > 2” [28].

The results of this study are consistent with previous related studies: Zhang *et al.* found that TCM soaking

can reduce the numbness VAS score of patients after lumbar surgery by 35–40%^[9]; Li *et al.* reported that acupoint moxibustion can increase the JOA score of patients with postoperative numbness by 4–6 points^[10]. This study further confirms that the combined application of the two can significantly improve the efficacy.

4.4. Limitations and prospects of the study

This study still has certain limitations: first, the study is a single-center design with a small sample size (only 80 cases), which may limit the extrapolation of the results due to selection bias. In the future, multi-center studies should be carried out, and the sample size should be expanded to more than 200 cases to improve the universality of the results. Second, the follow-up time is short, only the efficacy within 1 week of intervention was observed, and the long-term effects, such as numbness recurrence 6 months after surgery, were not evaluated. In the follow-up, the follow-up should be extended to 6–12 months to further verify the long-term stability of the efficacy. Third, the efficacy evaluation only relies on subjective indicators such as numbness VAS score and JOA score, and objective indicators such as serum inflammatory factors (such as IL-6, TNF- α) and nerve conduction velocity were not detected, making it difficult to deeply explain the intervention mechanism. In future studies, such indicators can be included to improve the mechanism discussion. In the follow-up, the Delphi method will be used to optimize the TCM soaking prescription and acupoint selection plan, and further carry out multi-center, large-sample, long-term follow-up studies to provide more sufficient evidence-based support for the clinical promotion of TCM soaking combined with acupoint moxibustion therapy.

5. Conclusion

TCM soaking combined with acupoint moxibustion can effectively reduce the degree of numbness in patients after transforaminal endoscopic surgery, improve lumbar nerve function, and has high safety (no serious adverse reactions). This therapy combines the advantages of TCM external treatment, is easy to operate, and has high patient acceptance. It can be used as an auxiliary intervention plan for patients with numbness after transforaminal endoscopic surgery, and is worthy of clinical promotion.

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Disclosure statement

The authors declare no conflict of interest.

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