Nursing Experience of Warm Moxibustion and Gua Sha for Lower Limb Numbness After Percutaneous Endoscopic Lumbar Discectomy: A Case Report

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Abstract

This article summarizes the nursing experience of treating lower limb numbness after transforaminal endoscopic surgery in a patient with lumbar disc herniation using warm moxibustion and gua sha therapy. Based on comprehensive nursing assessment and routine nursing care, and through syndrome differentiation-based nursing care, after administering one course of meridian-based warm moxibustion and gua sha therapy, the numbness symptoms in the patient's affected limb resolved, with significant therapeutic effects, warranting clinical promotion.

Full Text

Nursing Experience of Treating Lower Limb Numbness After Foraminoscopic Surgery for Lumbar Disc Herniation with Warm Moxibustion and Gua Sha: A Case Report

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Abstract

This article summarizes the nursing experience of treating lower limb numbness after foraminoscopic surgery for lumbar disc herniation using warm moxibustion and gua sha in one patient. Based on comprehensive nursing assessment and routine care, and guided by syndrome differentiation, the patient received one course of meridian-based warm moxibustion and gua sha therapy. Following

treatment, the numbness in the affected limb completely resolved, demonstrating significant therapeutic efficacy that warrants clinical promotion.

Keywords: lumbar disc herniation; foraminoscopy; numbness; warm moxibustion and gua sha

Introduction

Lumbar disc herniation (LDH) is a common and frequently occurring orthopedic disease, with a prevalence of approximately 1.6%–13.4% [1-4]. It is primarily caused by rupture of the annulus fibrosus and protrusion of the nucleus pulposus compressing the nerve roots, manifesting as low back pain, pain, numbness, discomfort, or sensory abnormalities extending from the buttocks to the posterior lower limb (the pathway of the Bladder Meridian of Foot-Taiyang) and the lateral lower limb to the foot (the pathway of the Gallbladder Meridian of Foot-Shaoyang). In traditional Chinese medicine (TCM), LDH falls under the categories of "Bi Syndrome," "Lumbago," and "Lumbocrural Pain" [5].

In recent years, with the advancement of minimally invasive concepts, foraminoscopic surgery has been widely used in LDH patients due to its effectiveness in relieving pain, numbness, and other clinical symptoms caused by nerve root compression, along with advantages such as minimal trauma, rapid recovery, and short hospital stays. However, despite its numerous benefits compared to traditional open surgery, some patients still experience residual lower limb numbness after foraminoscopic surgery due to long-term nerve root compression, and recovery within a short period is often difficult [6-7]. Residual lower limb numbness belongs to the category of "Bi Syndrome" and is associated with blood stasis caused by surgery, impaired qi movement, and the body's difficulty in transporting and absorbing these pathological products, leading to qi stagnation and blood stasis [8]. Warm moxibustion and gua sha, as a characteristic TCM therapy, integrates moxibustion, gua sha, and tuina massage. It utilizes a warm moxibustion cup for scraping, stimulating the affected areas through the warming and medicinal effects of mugwort to harmonize the zang-fu organs, warm the meridians and dispel cold, activate blood and resolve stasis, and dredge the meridians [9]. This article reports the nursing experience of treating lower limb numbness after foraminoscopic surgery for lumbar disc herniation with warm moxibustion and gua sha in one case.

1. Clinical Data

The patient was a 56-year-old male who presented to our hospital with chief complaints of "low back pain for over 20 years, worsening for 3 months." He was admitted on August 29, 2023, with a diagnosis of lumbar disc herniation. At admission, the patient appeared to be in pain with a normal complexion and clear speech. His tongue was dark purple with a thin white coating, and his pulse was wiry and choppy. He experienced low back pain with radiating numbness in

the right lower limb. The pain was fixed in location, aggravated by pressure, and movement was limited. Physical examination revealed normal lumbar curvature, paravertebral tenderness (+-), interspinous tenderness at L3/4, L4/5, and L5/S1 with positive percussion pain radiating to the lateral aspect of the right lower leg, accompanied by numbness and discomfort. The right straight leg raise test was 70° (negative), the pick-up test was positive, the abdominal thrust test was positive, the Achilles reflex was absent, the patellar reflex was present, and dorsiflexion strength of the foot was adequate. CT imaging showed disc herniation at L3/4, L4/5, and L5/S1.

TCM diagnosis: Lumbar Bi Syndrome (qi stagnation and blood stasis pattern). **Western medicine diagnosis:** Lumbar disc herniation.

On September 1, 2023, the patient underwent percutaneous foraminoscopic discectomy, decompression, and annuloplasty under local anesthesia. On the third postoperative day, the patient reported persistent numbness and discomfort in the right buttock and lower limb. His tongue was dark purple with a thin white coating, and his pulse was wiry. Appetite and sleep were normal, and bowel and urinary functions were regular. To address the postoperative right lower limb numbness, meridian-based warm moxibustion and gua sha therapy was administered in addition to routine postoperative care, at a frequency of 3 times per week, 30 minutes per session, with 3 sessions constituting one course. The patient completed one full course of treatment.

2. Nursing Care

2.1 Nursing Assessment

Assessment of postoperative limb numbness severity: The Visual Analogue Scale (VAS) for numbness was used for scoring [10-11]. A 10-cm ruler was employed, with scores assigned from the 0-cm mark according to scale gradations to represent the patient's subjective numbness symptoms. Patients assigned scores based on their own symptoms, and nurses evaluated the severity of numbness according to these scores, categorizing it into four grades: none (0 points), mild (1-3 points), moderate (4-6 points), and severe (7-10 points). Prior to warm moxibustion and gua sha treatment, the patient's affected limb numbness was scored as 5 points, corresponding to the "moderate numbness" category.

2.2 Nursing Diagnoses

1. Activity intolerance: related to numbness in the affected lower limb
2. Anxiety and fear: related to concerns about persistent postoperative numbness

2.3 Nursing Plan

Based on the above nursing assessment and diagnoses, the following nursing plan was formulated: 1. Alleviate postoperative numbness in the affected limb 2. Relieve patient anxiety and tension

2.4.1 Routine Nursing Care

1. **Medication and activity guidance:** Administered oral neurotrophic drugs as prescribed. Patients were advised to reduce the duration and intensity of ambulation, prioritize bed rest, protect the lumbar region, and maintain clean and dry incisions through regular dressing changes.
2. **Dietary guidance:** Based on the TCM pattern differentiation of qi stagnation and blood stasis, the patient was instructed to consume foods such as black fungus, enoki mushrooms, and peach kernels, while avoiding greasy and rich foods. Dietary adjustments were made according to changes in tongue coating.
3. **Psychological support:** Enhanced communication with the patient provided personalized psychological support. The patient was guided to use music therapy and distraction techniques to alleviate tension and anxiety.

2.4.2 Warm Moxibustion and Gua Sha

The procedure was performed according to the hospital's standard protocol for warm moxibustion and gua sha:

1. **Pre-procedure assessment:** Evaluated the patient's skin condition, heat and pain tolerance, and obtained patient cooperation.
2. **Patient education:** Explained the purpose, method, key cooperation points, and precautions of the procedure.
3. **Meridian-based acupoint selection:** For the Bladder Meridian of Foot-Taiyang, points included Shenshu (BL23), Guanyuanshu (BL26), Weizhong (BL40), Chengshan (BL57), and Chengfu (BL36). For the Gallbladder Meridian of Foot-Shaoyang, points included Huantiao (GB30), Yanglingquan (GB34), and Ashi points.
4. **Procedure:** The patient was positioned appropriately. A 2-cm moxa stick was inserted into the central needle of the warm moxibustion gua sha cup and ignited. Once the cup rim became warm, scraping oil was applied along the meridians to be treated. The warm moxibustion gua sha cup was held at a 15° angle to the skin to sequentially scrape the Bladder and Gallbladder Meridians. The procedure began with bilateral Shenshu to Guanyuanshu, then Chengfu to Chengshan on the affected lower limb, followed by Huantiao to Yanglingquan on the affected side. Key focus was placed on Shenshu, Guanyuanshu, Chengfu, Weizhong, Chengshan, Huantiao, and Yanglingquan.
5. **Post-procedure care:** Patient privacy was maintained, and warmth was ensured throughout the procedure, with a screen provided when neces-

sary. The scraping speed was slow and gentle, with uniform and stable pressure until the skin became flushed (erythematous), without requiring petechiae (sha) formation. The patient's subjective experience was regularly assessed. After scraping, patients were advised to avoid wind-cold exposure, refrain from bathing for 4–6 hours, and drink plenty of warm water. The treatment frequency was 3 times per week, 30 minutes per session, with 3 sessions constituting one course. The patient completed one full course.

2.5 Nursing Outcome Evaluation

After completing one course of warm moxibustion and gua sha treatment, the VAS for numbness was reassessed: the patient's right lower limb numbness had completely resolved, with a score of 0, corresponding to the "none" category.

2.6 Follow-up and Outcomes

The patient demonstrated good compliance with the warm moxibustion and gua sha treatment, with no adverse reactions occurring during the course. The patient was satisfied with the therapeutic outcomes. On September 11, the patient exhibited normal muscle strength, no numbness in the right lower limb, and adequate distal circulation and sensation, and requested discharge. A telephone follow-up on September 17 revealed no discomfort. The patient was advised to attend regular follow-up appointments and to return for outpatient consultation if any discomfort arose.

Discussion

LDH belongs to the TCM categories of "Bi Syndrome" and "Lumbago." Following surgical treatment, LDH patients experience consumption of qi, blood, and zang-fu organs, leading to pain. Additionally, meridian obstruction and failure of the skin, muscles, and meridians to be nourished result in lower limb numbness [12]. For residual numbness after endoscopic surgery for LDH, clinical treatment typically involves hormonal medications and neurotrophic drugs such as mecobalamin. However, neurotrophic drugs have a slow onset of action, while hormonal medications have a short duration of effect, often resulting in recurrent numbness upon discontinuation ("medicine stops, numbness returns") and significant side effects. Therefore, orthopedic practitioners have identified the need for simple and rapid solutions to residual postoperative numbness as an important research direction [13].

The *Neijing* states: "When the flow of nutritive and defensive qi is sluggish and the meridians are intermittently obstructed, there is blockage; when the skin lacks nourishment, numbness ensues." External contraction of dampness and overexertion, combined with internal kidney qi deficiency, act synergistically to cause impaired flow of qi, blood, and meridians, and failure to nourish the sinews and vessels. This results in limb numbness due to blockage and malnourishment.

Consequently, TCM treatment for postoperative lower limb numbness in LDH focuses on regulating qi and blood, strengthening the spleen and tonifying the kidney, activating blood and resolving stasis, and dredging the meridians [14]. Warm moxibustion and gua sha, as an external TCM technique, integrates the fundamental principles of moxibustion and gua sha. Guided by TCM syndrome differentiation and treatment theory, it offers advantages including treatment of both root and branch, non-invasiveness, and high comfort. Moxibustion activates blood and resolves stasis, while gua sha dredges the meridians. Their combined use produces synergistic effects, ultimately achieving the goals of activating blood, resolving stasis, dredging meridians, and harmonizing qi and blood [15].

The pathological site of lumbago involves the pathways of the Bladder and Gallbladder Meridians. According to the principle that "where the meridian passes, treatment can be applied," acupuncture prescriptions for lumbago in TCM frequently select points along these two meridians [16], consistent with the characteristic of meridian-based point selection. In this case, to address the patient's right lower limb numbness, the selected acupoints for warm moxibustion and gua sha included Shenshu, Weizhong, Guanyuanshu, and Chengshan to regulate qi, activate blood, strengthen the yuan qi, and relax the sinews and meridians; and Huantiao and Yanglingquan to nourish yin, tonify the kidney, dispel wind-cold, and activate blood and resolve stasis. The combination of these points achieved the goals of harmonizing qi and blood, activating blood and resolving stasis, and dredging the meridians [17], which aligned with the patient's pattern of qi stagnation and blood stasis.

In summary, for patients with lumbar disc herniation experiencing limb numbness after foraminoscopic surgery, administering warm moxibustion and gua sha on the basis of routine TCM syndrome differentiation and nursing care can effectively improve limb numbness symptoms and warrants clinical promotion.

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

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Note: Figure translations are in progress. See original paper for figures.