Nursing Experience in Outpatient Treatment of a Patient with Lumbar Disc Herniation

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Abstract

This article summarizes the nursing experience from the outpatient treatment of a patient with lumbar disc herniation. Through paravertebral nerve block and peri-treatment nursing care interventions, the patient' s pain symptoms were improved, anxiety was alleviated, and quality of life was enhanced.

Full Text

Nursing Experience in the Outpatient Treatment of a Patient with Lumbar Disc Herniation

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Abstract

This paper summarizes the nursing experience of outpatient treatment for a patient with lumbar disc herniation. Through paravertebral nerve block intervention and peri-treatment nursing care, the patient' s pain symptoms were alleviated, anxiety was reduced, and quality of life was improved.

Keywords: paravertebral nerve block; lumbar disc herniation; nursing; pain

Introduction

Chronic low back and leg pain caused by lumbar disc herniation (LDH) has become one of the serious diseases affecting the general population, imposing a

significant burden on social productivity and the economy. Although substantial progress has been made in the diagnosis and treatment of chronic LDH pain, it remains a worldwide medical challenge due to its complex etiology and pathology [1]. Lumbar disc herniation refers to the protrusion of nucleus pulposus tissue into the spinal canal following degenerative changes in the intervertebral disc, which stimulates or compresses spinal nerve roots and blood vessels, resulting in clinical symptoms such as pain and numbness in the lower back or lower extremities [2]. The fundamental cause of low back and leg pain in LDH patients is the irritation of nerve roots, spinal cord, and cauda equina by the herniated disc [3]. Paravertebral nerve block analgesia achieves therapeutic effects by injecting medication into the paravertebral space to block the paravertebral spinal nerves, their branches, and sympathetic trunks, offering simplicity and efficacy [4]. This article reports the nursing experience of a patient with lumbar disc herniation who underwent paravertebral nerve block analgesia.

Clinical Data

The patient was a 64-year-old female who presented with a chief complaint of "lower extremity pain for 10 years, exacerbated for one day." She experienced lower extremity pain, difficulty walking, and bilateral lower limb coldness and numbness, with no recent weight changes. She had a history of hypertension for over 10 years, well-controlled with regular medication. Her Visual Analogue Scale (VAS) score was 7 points. Lumbar CT indicated lumbar disc herniation. On August 4, 2022, she walked to the outpatient clinic for treatment.

Upon assessment, the patient was conscious and in fair spirits, entering the treatment room in a wheelchair. Vital signs were blood pressure 136/74 mmHg, heart rate 72 beats/min, SpO_2 98%, and VAS score 9 points. The patient was guided to the outpatient treatment room and assisted into a prone position with a soft pillow under her abdomen to accentuate lumbar lordosis. During the procedure, continuous communication with the patient ensured timely feedback about her sensations, facilitating accurate needle placement and optimal therapeutic effect. After treatment, the injection site was compressed for hemostasis for 5 minutes and covered with sterile dressing. Vital signs were monitored for 30 minutes.

Nursing Care

Pre-Treatment Nursing Assessment: After entering the room, the patient' s pulse, oxygen saturation, and blood glucose were monitored and found to be normal, though blood pressure was elevated (146/84 mmHg). She had no history of food or drug allergies. The VAS score was 7 points, with chief complaints of low back and lower extremity pain and numbness. Both content and level of consciousness were normal—she was alert, able to respond correctly, and could cooperate with the procedure. She lacked knowledge about the treatment method and process, requiring detailed explanation to ensure better cooperation. As anxiety and depression are the most representative negative emotions asso-

ciated with pain [5], the patient exhibited anxiety due to pain and uncertainty about the treatment. However, after communication, she demonstrated good compliance and strong trust in the medical staff, which facilitated treatment implementation. In summary, the patient met the criteria for treatment.

Nursing Interventions: The patient was instructed to rest for 10 minutes to minimize blood pressure fluctuations from activity. The treatment principle and procedure were introduced and explained, including cases of successful pain reduction after treatment to enhance her confidence and alleviate anxiety. After 10 minutes, blood pressure was rechecked at 136/74 mmHg. She was informed about cooperation during treatment, specifically the need to provide feedback about bodily sensations during puncture and injection to achieve optimal needle placement and therapeutic effect.

Intra-Treatment Nursing Treatment Cooperation: The patient was assisted into a prone position with a soft pillow under her abdomen to elevate the lower back and create lumbar flexion, helping to expose the lumbar skin. The opposite bed rail was raised to prevent falls. Strict aseptic technique was maintained while preparing equipment and medications. Syringes were labeled with drug names, and double verification with the physician was performed during medication administration. The anesthesia machine was tested for functionality, and the emergency cart was checked for complete, unexpired medications to ensure patient safety in case of emergencies. During the physician' s puncture, the patient was asked about sensations at the puncture site and nerve conduction, with feedback provided to the physician.

Treatment Observation: The patient' s mental status was observed through facial expressions and communication, with reassurance and encouragement provided to reduce anxiety. Vital signs were monitored continuously. The physician was assisted in observing for blood return upon needle withdrawal to avoid intravascular injection or accidental subarachnoid injection, and to monitor for allergic reactions, ensuring treatment safety.

Post-Treatment Nursing The puncture site was compressed for hemostasis for 5 minutes and covered with sterile dressing. The patient was assisted with dressing and performed posterior leg lifts on the bed, demonstrating normal mobility without weakness or numbness, and was able to stand at the bedside. She was assisted out of bed to prevent falls, and walked with support without experiencing leg weakness, discomfort, dizziness, or headache. The patient was then assisted to the observation room for 20 minutes of vital sign monitoring, which remained stable without abnormalities.

Traditional Chinese Medicine Nursing Ear Acupressure: According to the *Inner Canon*, "The ear is the gathering place of the ancestral vessels" [6], and *Lingshu · Kouwen* states: "The ear is where all vessels converge." This indicates that all meridians of the body gather and intersect at the ear. When

disease occurs, corresponding reaction points appear on the ear, and stimulating these acupoints can achieve therapeutic purposes [7]. The patient was asked about alcohol or adhesive allergies. Acupoint selection was based on her low back and leg pain and hypertension. Main points included: Buttocks, Sciatic Nerve, Shenmen, Lumbosacral Vertebrae, Knee, Superior Triangular Fossa, and Ear Apex. The supplementary point was Subcortex. Procedure: The patient assumed a sitting position. The ear skin and operator' s fingers were disinfected with 75% alcohol from top to bottom, inside to outside, and front to back. After disinfection and drying, a probe was used to locate acupoints where the patient experienced soreness, distension, and pain. Ear acupressure pellets were applied to these points with tweezers. Pressure was applied primarily using reinforcing technique, with point pressure massage used to stimulate corresponding acupoints. Pressure intensity was adjusted to patient tolerance, with each point pressed for 1-2 minutes, 3-6 times daily [8], to regulate organ qi and blood, alleviate low back and leg pain, and control blood pressure.

Red Light Therapy: Lumbar and back red light pain therapy was administered. Through infrared and thermal effects, acupoints were stimulated to improve microcirculation and achieve anti-inflammatory and analgesic effects. The patient was assisted into a prone position with lumbar and back skin exposed. The red light therapy lamp was positioned 20-25 cm from the skin for 10 minutes. During treatment, the skin condition was observed every 3 minutes for redness, with timely adjustments made to prevent burns.

Health Education

Patients were instructed to remove the puncture site dressing the next morning and to keep the area clean and dry for 24 hours without water exposure to prevent infection. They were advised to rest in bed for 6 hours after returning home, avoid heavy lifting and prolonged bending, and wear a lumbar support to reduce spinal stress. A light diet with reduced salt intake was recommended for blood pressure control, along with increased consumption of vegetables and fruits to supplement vitamins and nourish nerves to reduce pain. Patients were taught energy-saving methods for daily waist protection, such as using long-handled mops or vacuum cleaners for housework to reduce lumbar burden. They were informed to return for follow-up if any post-treatment discomfort occurred.

Follow-Up and Outcomes

[Table showing follow-up timeline: Before treatment, Treatment day, Day 2, Day 4]

Lumbar disc herniation is a common disease, and with the aging of society, elderly LDH patients are gradually increasing [9]. It is one of the most common causes of low back and leg pain [10]. Paravertebral nerve block therapy injects medication into the paravertebral space to block pain nerve conduction, demonstrating significant analgesic effects [11]. Although paravertebral nerve

block analgesia is a minimally invasive treatment, its injection site specificity entails certain risks, requiring peri-treatment nursing to address potential nursing problems before, during, and after treatment with adequate preparation. Pre-treatment nursing addresses patient pain symptoms and fear of the unknown by explaining the treatment method, procedure, prognosis, and cooperation requirements to ensure smooth implementation. Intra-treatment nursing plays an indispensable role in cooperating with physician operations while communicating with patients to ensure accurate treatment positioning and observation that medication is not inadvertently injected into other locations. Post-treatment nursing and health education are also crucial factors affecting patient prognosis, requiring real-time monitoring of vital signs with immediate reporting and management of abnormalities, close attention to the treatment site, explanation of post-treatment precautions, return to traditional Chinese medicine health concepts, and provision of TCM nursing services meeting "Healthy China" requirements [12]. Appropriate TCM external treatment techniques are applied synergistically to reduce pain.

This case study demonstrates that correct and effective nursing interventions combined with paravertebral nerve block analgesia ensured safe and smooth treatment completion, promoted pain reduction, and gained patient recognition. Future clinical work should involve in-depth research with increased sample sizes to further refine this treatment and nursing protocol.

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