

Value Analysis of Combined Application of Acupuncture and Massage in Community Health Service for Patients with Lumbar Disc Herniation

Qili Dai

Community Health Service Center of Bund Street, Ningbo 315000, Zhejiang, China.

How to cite this paper: Qili Dai. (2024) Value Analysis of Combined Application of Acupuncture and Massage in Community Health Service for Patients with Lumbar Disc Herniation. *International Journal of Clinical and Experimental Medicine Research*, 8(3), 477-481.
DOI: 10.26855/ijcemr.2024.07.019

Received: June 25, 2024

Accepted: July 22, 2024

Published: August 19, 2024

***Corresponding author:** Qili Dai, Community Health Service Center of Bund Street, Ningbo 315000, Zhejiang, China.

Abstract

Objective: To study and analyze the value of acupuncture and massage combined application in community health services for patients with lumbar disc herniation. **Methods:** 60 patients with lumbar disc herniation admitted to a community health service center from September 2021 to November 2023 were randomly divided into a study group and control group, with 30 cases in each group. The control group received conventional treatment for lumbar disc herniation, including drug analgesia, traction therapy, etc., while the study group received acupuncture and massage combined treatment. After 8 weeks of treatment, the therapeutic effect, functional recovery before and after treatment and core muscle endurance of the two groups were evaluated and compared. **Results:** After treatment, the total effective rate of the study group was higher than that of the control group; the ODI and VAS scores of the study group were lower than those of the control group; the JOA scores of the study group were higher than those of the control group; the endurance test time of the lumbar and abdominal isometric muscles was longer than that of the control group, with statistical significance ($P < 0.05$). **Conclusion:** The combined application of acupuncture and massage in community health services for patients with lumbar disc herniation has a high effect, can promote the functional recovery of patients, and improve core muscle endurance.

Keywords

Lumbar disc herniation; The Community; Health services; Acupuncture; Massage

Lumbar intervertebral disc herniation is a degenerative change of the lumbar intervertebral disc caused by different factors, and it is also a common spinal degenerative disease in modern people, which is common in middle-aged and elderly people. In recent years, with the change in people's lifestyle habits, the incidence of this disease has shown a certain high incidence and a younger trend [1, 2]. The main manifestations of patients with lumbar disc herniation are lumbar and leg pain, sciatica, and lower limb numbness [3]. At present, the pathogenesis of lumbar disc herniation has not been fully defined. It is generally believed that the occurrence of this disease is related to various factors such as development, injury, pregnancy, and disc degeneration [4], and modern people's desk work and sedentary behavior are the direct causes of the high incidence of this disease. Modern medical treatment for this disease includes conservative intervention and surgical treatment, among which surgical treatment has a higher risk and is relatively rarely used [5]. This disease belongs to "lumbago" "bi syndrome" and other categories in Chinese medicine, Qi deficiency and blood stasis, this deficiency is the main pathogenesis of this disease, Chinese medicine in the treatment of this disease has a long history and rich theoretical practice accumulation. In recent years, our hospital has introduced

TCM external treatment of acupuncture and massage into community health services for patients with lumbar disc herniation and has obtained satisfactory results.

1. Data and methods

1.1 General Information

A total of 60 patients with lumbar disc herniation admitted to community health service centers from September 2021 to November 2023 were randomly divided into a study group and a control group by random number table method, with 30 cases in each group. In the study group, there were 13 males and 17 females, aged 45-73 (58.69 ± 6.51) years, and the disease course was 1-8 (4.59 ± 1.20) years. In the control group, there were 15 males and 15 females, aged 46-72 (59.11 ± 6.75) years, and the course of the disease was 1-7 (4.39 ± 1.43) years. There was no statistical significance in comparison between groups ($P > 0.05$). Inclusion criteria: (1) Meeting the diagnostic criteria for lumbar disc herniation; (2) no history of treatment for the disease in the past 3 months; (3) In line with the indications of the treatment method used in this study; (4) Those who actively cooperate with treatment; (5) People with normal cognitive and communication skills. Exclusion criteria: (1) previous spinal surgery history; (2) Patients with severe osteoporosis; (3) Poor control of underlying diseases; (4) Patients with serious physical diseases; (5) Malignant lesions.

1.2 Methods

1.2.1 Control group

Drug analgesia, traction therapy, and other interventions were carried out, combined with the actual situation of patients to give non-steroidal anti-inflammatory drugs intervention to relieve the symptoms of low back pain. Manual traction to relieve nerve root compression and relieve disc pressure once a week. Treatment for 8 weeks.

1.2.2 Study group

On the basis of the control group, acupuncture and massage combined treatment was implemented at the same time, as follows.

(1) Acupuncture and moxibustion: Zhongwan, Shui, Shenque, Guanyuan, Tianshu, etc., were selected as the main points of acupuncture intervention. The affected vertebra was L3/4, with obvious symptoms of waist and leg pain and limb numbness, Xie Xi was added. The affected vertebra was L4/5, with lateral leg pain and numbness, Yang Fu was added, and the affected vertebra was L5/S1, with pain and numbness of lower limbs, Kunlun was added. During the treatment, the supine position was maintained, the above points were located, and routine disinfection was carried out. Disposable acupuncture was used to obtain qi by manipulation, and the needle was retained for 20 to 30 minutes, during which the needle was performed 1 to 2 times. Moxibustion was carried out at Shenque and applied for 30min. The patients were treated once a day, 5 times a week for 8 weeks.

(2) Massage: The stereopositioning oblique manipulation is applied in combination with the lifting rotation oblique manipulation. In the stereopositioning oblique manipulation, the doctor keeps lying on the side, exerts pressure along the spine direction through the palm and finger to maintain moderate strength, and gradually stretches the muscle tissue of the patient's waist. In the lifting rotation oblique manipulation, the doctor takes the supine or lateral lying position, and the doctor combines the palm and finger to rotate the patient's waist with appropriate strength. At the same time, the position of the intervertebral disc is adjusted by lifting to relieve nerve root compression. The patients were treated once a day, 5 times a week for 8 weeks.

1.3 Observation indicators

1.3.1 Evaluation criteria of therapeutic effect

Evaluation of therapeutic effect shall be carried out according to the improvement of physical symptoms such as waist and leg pain, limited activity, physical examination results, and recovery of daily activities before and after treatment. After treatment, the patient's physical symptoms basically disappeared, physical examination was not abnormal, and the daily activities were often effective. Physical symptoms improved significantly, physical examination results improved, and slight restriction of daily activities as effective, otherwise ineffective.

1.3.2 Evaluation of functional recovery

Oswestry Disability Index (ODI), Japanese Orthopaedic Association Score (JOA), and Visual Analog Scale (VAS) were used to evaluate the functional recovery of patients before and after treatment. The total score on the ODI scale was 0-50, the lower the score, the better the lumbar functional recovery; the total score on the JOA scale was 0-29,

the higher the score, the better the functional recovery; the total score of VAS scale was 0-10, the lower the score, the less pain.

1.3.3 Evaluation of core muscle fitness

The endurance level of low back dynamic and static core muscle of each patient was evaluated before and after treatment in prone position, supine position and other states, and the endurance test time of low back isometric muscle and abdominal isometric muscle was recorded.

1.4 Statistical methods

SPSS23.0 statistical software was used for processing, measurement data were represented by ($\bar{x} \pm s$), comparison by t-test, counting data by percentage, comparison by χ^2 test, and $P < 0.05$ was considered statistically significant.

2. Results

2.1 Comparison of treatment effects between the two groups (see Table 1)

Table 1. Comparison of treatment effect between the two groups (case %)

Group	Remarkable	Effective	In vain	Total effective rate
Study Group/30	17 (56.67)	11 (36.67)	2 (6.67)	28 (93.33)
Control group/30	10 (33.33)	12 (40.00)	8 (26.67)	22 (73.33)
χ^2				4.320
P				0.038

2.2 Comparison of functional recovery between the two groups before and after treatment (see Table 2)

Table 2. Comparison of functional recovery between the two groups ($\bar{x} \pm s$)

Group	ODI (points)		JOA (points)		VAS (points)	
	pre-treatment	post-treatment	pre-treatment	post-treatment	pre-treatment	post-treatment
Study Group/30	33.45±3.51	11.94±1.43 [@]	13.89±2.32	22.03±1.43 [@]	6.45±0.91	1.56±0.60 [@]
Control group/30	34.01±3.39	16.73±2.29 [@]	13.31±2.29	17.45±2.56 [@]	6.29±0.85	2.91±0.71 [@]
t	0.629	9.718	0.975	8.555	0.704	7.954
P	0.532	< 0.001	0.334	< 0.001	0.484	< 0.001

Note: Compared with before treatment, [@]P < 0.05

2.3 Comparison of core muscle endurance before and after treatment between the two groups (see Table 3)

Table 3. Comparison of core muscle endurance before and after treatment between the two groups ($\bar{x} \pm s$)

Group	Isometric muscles of lower back(s)		Abdominal isometric muscles(s)	
	pre-treatment	post-treatment	pre-treatment	post-treatment
Study Group/30	84.89±6.81	97.43±4.12 [#]	74.54±4.04	90.54±3.92 [#]
Control group/30	85.27±6.49	92.03±4.45 [#]	73.84±4.23	83.84±4.54 [#]
t	0.221	4.877	0.655	6.118
P	0.826	< 0.001	0.515	< 0.001

Note: Compared with before treatment, [#]P < 0.05

3. Discussion

Lumbar disc herniation is directly related to disc degeneration and annulus fibrosus rupture. Lumbago, leg pain, claudication, and other symptoms may occur during the progression of the disease. If the disease fails to provide timely and effective intervention, the muscle strength of the innervation muscles may be affected [6], and problems such as muscle weakness and muscle atrophy may occur [7], which will have a great negative impact on the normal life of the patients. Patients in the acute phase of the disease need strict bed rest and generally need to avoid bending and reduce the amount of activity. Patients with severe symptoms of back and leg pain need to receive drug treatment. Non-steroidal anti-inflammatory drugs, opioid analgesics, and other commonly used analgesics can alleviate the symptoms of back and leg pain, but there are certain adverse drug reactions in drug treatment, such as liver toxicity and gastrointestinal discomfort, so it is not suitable for long-term use, and monitoring needs to be strengthened during medication. Traction therapy is a conservative intervention strategy commonly used in community health services. Manual traction used in this study is simple and safe, and gravity traction and mechanical traction are also used [8]. Traction therapy can effectively improve nerve root compression, reduce disc pressure, and relieve muscle spasms in the lower back. Traditional Chinese medicine believes that the occurrence of lumbar disc herniation is related to weakness of liver and kidney, deficiency of qi and blood, resulting in loss of bone marrow and muscles. At the same time, the internal invasion of wind-cold and dampness pathogens leads to blockage of the meridians and poor movement of qi and blood, which is also related to the occurrence of this disease [9]. Failure to treat and misuse the disease for a long time will lead to a deficiency of both qi and blood and pain if it is not honored [10]. In this study, some patients with lumbar disc herniation were treated with traditional Chinese acupuncture and massage on the basis of conventional drug therapy and traction therapy. The results showed that the total effective rate of the patients in the study group after treatment was higher than that in the control group, the ODI and VAS scores in the study group after treatment were lower than those in the control group, and the JOA scores were higher than those in the control group. The endurance test time of the lumbar isometric muscle and abdominal isometric muscle was longer than that of the control group, and the difference was statistically significant ($P < 0.05$). TCM acupuncture and massage intervention can effectively promote the control of patients' conditions and improve the function of the lumbar spine.

In traditional Chinese acupuncture and moxibustion, Zhongwan, moisture, Shenque, Guanyuan, Tianshu, and other points are used. Zhongwan is the fund-raising point of the stomach. Acupuncture at this point can effectively tonify the middle qi, strengthen the stomach and spleen, calm and calm the mind, promote Qing, and reduce turbidity. Water acupuncture and moxibustion can play a better analgesic qi, and remove dampness and detumescence effects. Guanyuan is the small intestine mu point, and it is also the meeting of foot three Yin and Ren pulse. In traditional Chinese Medicine, it is considered that this point belongs to the location of vitality growth. Acupuncture and moxibustion on this point have better functions of warming and tonifying yuan, cultivating the kidney and consolidating the root, and tonifying blood. Zhongwan, moisture, and Guanyuan combined acupuncture and moxibustion can regulate the spleen and stomach, tonifying the liver and kidney, and play a good synergistic role. Tianshu belongs to the large intestine Mu point. Acupuncture at this point can play a good role in promoting qi and blood, strengthening the stomach and intestines, and assisting in lifting and lowering. The use of mild moxibustion in Shenque can play a better role in strengthening yuan and consolidating the root, strengthening spleen and returning Yang, promoting qi and water, promoting blood and dispersing. The combination of Shenque and Tianshu can effectively reconcile three jiao. Modern medicine believes that acupuncture and moxibustion can relieve pain, promote tissue self-repair and other effects. When applied to patients with lumbar disc herniation, acupuncture and moxibustion can promote the dissipation of local inflammation, improve pain and swelling, improve qi and blood circulation, and relieve muscle tension [11]. Massage is a kind of traditional Chinese medicine therapy with a long history, through different means of intervention, can effectively regulate the operation of qi and blood, thinning channels and collateralization, adjust body functions, applied to patients with this disease, can effectively relieve pain, reduce muscle tension, promote local blood circulation, help reduce swelling and pain, improve nerve conduction function. In stereotaxic oblique manipulation, the oblique manipulation can effectively relax the muscle tissue of the lower back, relieve spasticity, and effectively improve the position of the intervertebral disc to relieve the symptoms of lumbar discomfort. The position of the intervertebral disc can be adjusted effectively and the nerve root compression can be relieved by the lifting and rotating manipulation in the lifting and rotating oblique manipulation. Massage can relieve the tension and spasm of muscle groups through manipulation, which can effectively release the adhesion at the nerve root, improve the lumbar hip muscle spasm, and widen the vertebral space, so as to effectively reduce the pressure in the intervertebral disc, but also effectively adjust the external intervertebral disc pressure, and promote the recovery of nerve root function in patients with lumbar disc herniation.

4. Conclusion

In summary, the combined application of acupuncture and massage in community health services for patients with lumbar disc herniation can effectively improve the curative effect. It has outstanding value in promoting patients' functional recovery and enhancing core muscle endurance, making it a worthwhile endeavor.

References

- [1] Zhuang Y. Clinical study on the treatment of cold-dampness-blocking lumbar disc herniation with internal heat acupuncture and moxibustion combined with Duhuashi Decoction supplemented with flavor [J]. *Journal of Integrative Chinese and Western Medicine*, 2018, 16(03):173-177.
- [2] Tang Baosheng, Wu Bo, Zhang Anding. Comparative study on the safety and short-term effect of lateral and posterior percutaneous foraminoscopy and posterior fenestration in the treatment of lumbar disc herniation [J]. *Henan Journal of Surgery*, 2019, 30(03):134-136.
- [3] Chen Deta, Zhan Xinhua, Sheng Xiaoping, et al. Effect of percutaneous endoscopic foraminal discectomy on the treatment of L5-S1 lumbar disc herniation and the clinical effect of iliac crest height [J]. *Journal of Practical Medicine*, 2019, 40(12):1690-1695.
- [4] Zhang Li, Zhao Fuqiang. Clinical observation of residual symptoms of lumbar disc herniation treated by acupuncture Zusanli after foraminoscopy [J]. *Hubei Journal of Traditional Chinese Medicine*, 2019, 46(06):43-45.
- [5] Li Jia, Xiao Liping, Zeng Jun, et al. Effects of warm acupuncture and moxibustion combined with traditional Chinese medicine on pain, lumbar function and quality of life in patients with lumbar disc herniation [J/OL]. *Liaoning Journal of Traditional Chinese Medicine*, 2024, 1-10.
- [6] Li Bin, CAI Jinlei, Tian Jun, et al. Effect of transintermuscular approach via Quadrant channel in the treatment of lumbar disc herniation and its influence on pain degree and imaging parameters of lumbar functional recovery [J]. *Hebei Medical Journal*, 2019, 30(05):814-819.
- [7] Zhang L J. Effects of visible light therapy combined with Chinese medicine rub care on joint function recovery and quality of life in patients with lumbar disc herniation [J]. *Primary Medicine Forum*, 2018,28(15):131-134.
- [8] Tian Jiangni, Guo Jianjun. Clinical observation of lumbar vertebra fixation manipulation combined with magnetic needle in treatment of lumbar disc herniation [J]. *Journal of Guangzhou University of Chinese Medicine*, 2019, 41(06):1543-1549.
- [9] Cai J Q, Chen D Z, Lin C J, et al. Experience of Lin Chuangjian's treatment of lumbar disc herniation with "combined treatment of muscles and bones, harmonization of liver, spleen and kidney" [J]. *New Chinese Medicine*, 2019, 56(10):197-201.
- [10] Chen Chun, Jin Jiao, Mo Jingxuan, et al. Randomized controlled trial of acupuncture combined with point manipulation in the treatment of lumbar disc herniation in remission stage: 50 cases [J]. *Journal of Traditional Chinese Medicine*, 2018, 65(10):1026-1032.
- [11] Qi Wanmei, Qu Shao, Yan Xingke, et al. Effect of acupuncture combined with distal point selection on lumbar and lower limb circulation temperature in patients with solar meridian lumbar disc herniation [J/OL]. *Chinese Journal of Traditional Chinese Medicine Information*, 2024, 1-6.