

Research on the Effect of Traction Combined with Acupuncture and Massage Function Exercise on Patients with Lumbar Disc Herniation

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Abstract: To study the clinical effect of traction combined with acupuncture and massage function exercise in the Treatment of lumbar disc herniation. Methods A total of 180 patients with lumbar intervertebral disc herniation were selected and randomly divided into traction group, acupuncture group, combined group, and control group, with 60 cases in each group. The traction group was treated with traction, while the acupuncture group and the combined group were treated with traction combined with acupuncture and massage. Results After Treatment, the total effective rate was 76.56% in the traction group, 62.3% in the control group, and 98.44% in the acupuncture and combined groups. Comparing the curative effects of the three groups, the traction group was better than the control group ($P<0.05$), and the traction combined with acupuncture and massage was better than the traction group ($P<0.05$). It shows that traction therapy is better than acupuncture and massage, and the efficacy rate of traction therapy combined with acupuncture and massage is better than that of traction therapy. Conclusion Traction combined with acupuncture and massage function exercise has a better curative effect on patients with lumbar intervertebral disc herniation, which is worthy of popularization and application, is safe, and has high clinical value.

Keywords: Traction Therapy; Acupuncture and Massage Therapy; Lumbar Disc Herniation Therapy; Blocking the Inflammatory Response.

1. Introduction

Lumbar intervertebral disc herniation is a common and frequently-occurring disease in clinical practice, mostly caused by lumbar muscle strain, etc. Clinically, lumbar pain, lower extremity numbness, and pain are common in clinical discomfort, and in severe cases, it may even affect the daily work and life of patients. If not treated in time, it may be possible Loss of function or even disability [1]. At present, conservative Treatment and Surgical Treatment are mostly used in clinical practice. However, due to the risk of surgical treatment and the influence of adverse factors such as sequelae, most patients choose conservative treatment methods such as acupuncture, massage, or the combination of acupuncture and massage as the first choice. The clinical research on the Treatment of lumbar intervertebral disc herniation by acupuncture, massage, and other methods in recent years is summarized below. Lumbar intervertebral disc herniation is one of the common clinical diseases, mainly caused by the rupture of the lumbar intervertebral disc nucleus. Under the action of external force, the nucleus pulposus tissue protrudes from the annulus fibrosus and then compresses and stimulates the spinal nerve root, causing pain in the waist and legs. Pain is usually characterized by low back pain and radiating pain in one lower extremity or accompanied by lower extremity weakness and numbness, leading to movement disorders, which greatly affect the quality of life of patients [2]. Clinically, the Treatment of lumbar disc herniation includes conservative Treatment and Surgical Treatment. However, because surgical Treatment is invasive, prone to complications, and causes damage to the blood vessels and nerves of patients, traditional Chinese medicine and acupuncture are increasingly used by clinicians

and patients. of favor. Lumbar disc herniation is closely related to physical pathogenesis. The purpose of this study was to investigate the clinical effect of TCM acupuncture and massage in the Treatment of lumbar disc herniation [3]. See Fig. 1.

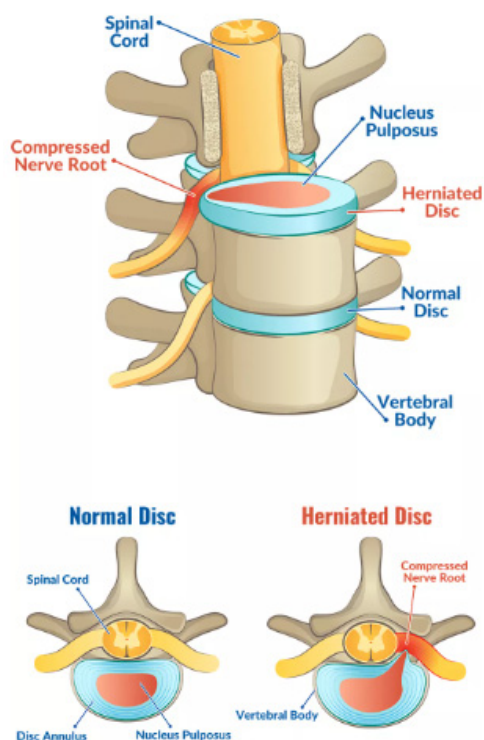


Fig 1. The etiological structure of lumbar disc herniation

2. The Etiology of Lumbar Disc Herniation

Lumbar intervertebral disc herniation is a clinical syndrome of typical nerve root pain caused by the destruction of the lumbar intervertebral disc structure, the rupture of the surrounding annulus fibrosus, and the inner nucleus pulposus protruding to stimulate the adjacent nerve roots. There are various conservative treatment methods for this disease. In recent years, traction therapy has been unanimously recognized by the majority of scholars as one of them. It can relieve the spasm of the lumbar muscles, reduce the lumbar lordosis, and improve the ligaments around the spine by acting on the waist [4]. Stretching, expanding the intervertebral foramen, changing the spatial position of the herniated intervertebral disc and the nerve root so as to eliminate the stimulation of the herniated intervertebral disc to the nerve root, which is beneficial to the improvement of local tissue congestion and edema; it can also cut off the vicious cycle of pain and relieve the pain of patients, to achieve clinical efficacy in relieving and treating lumbar disc herniation [5].

Effectiveness of Traction Modern medicine is the first choice for conservative Treatment of lumbar disc herniation, and its efficacy has been widely recognized and plays an irreplaceable role. Through the 2-week traction on patients with lumbar intervertebral disc herniation with acute sciatica and the analysis of the research results, the effectiveness of traction therapy was clarified. Through clinical trials, it has been concluded that the traction that is beneficial for patients to treat in a relaxed state should be a small dose of traction with a traction force of 30% of their body weight.

3. Instruments of Choice for Traction Therapy

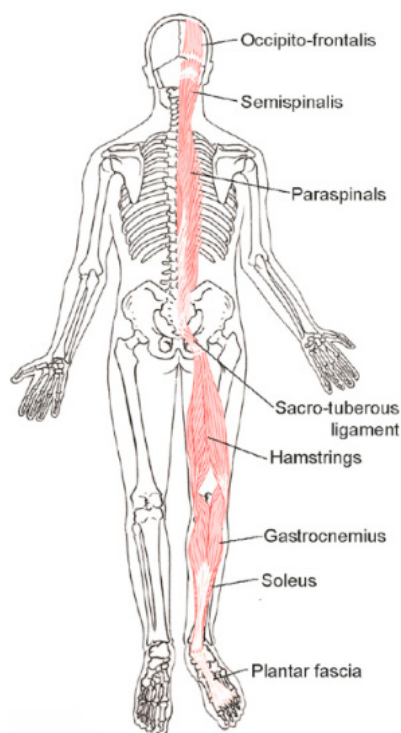


Fig 2. Treatment of lumbar disc herniation with Chinese medicine

In this paper, the traction bed produced by Philips in the United States is selected to use the TM-300 traction system in

a specific position. The traction quality gradually increases to about 110% of its own weight within 10s, and the duration is 1min. Lifting, when the straight leg is raised to the highest point, cooperates with pulling to loosen the nerve root; using intermittent traction, repeating the above action ten times for a total of 20 minutes, can achieve a good therapeutic effect. Intermittent high-dose traction can increase the effective space of the spinal canal and change the position of the nerve root and the protrusion at the same time, increasing the tension of the lumbar joint capsule and the posterior longitudinal ligament and forming a negative pressure to partially retract the protrusion. Compressed nerve roots are relieved or relieved. Clinical application of traction by autologous vertical suspension. see Fig. 2.

In a pilot study, 60 patients with lumbar intervertebral disc herniation were treated for 12 consecutive weeks. Through data collection and analysis, it was concluded that continuous autologous vertical suspension traction was effective in improving pain and function in patients with lumbar intervertebral disc herniation, and the operation was simple and safe. Randomized controlled trials of horizontal traction and self-gravity traction were used for data collection and analysis before and after treatment, and it was confirmed that both horizontal traction and self-gravity traction were significantly improved in the Treatment of lumbar disc herniation. Experimental studies have shown that the clinical symptoms of older patients with lumbar disc herniation can be better improved after lumbar traction therapy, which can reduce pain, improve lumbar function, and improve the levels of immune factors and serum pain substances. A clinical study was conducted on 60 patients with lumbar disc herniation. The results showed that the treatment mode of traction combined with massage could improve the therapeutic effect, improve the patient's low back pain scale score, and shorten the treatment course. For patients with lumbar intervertebral disc herniation, a comprehensive treatment method of tendon management, tune adjustment, and exercise is used. The tune adjustment method mainly uses four-dimensional traction based on syndrome differentiation and performs supine and prone traction according to the patient's condition. Supine traction includes longitudinal pelvic traction, flexion suspension, suspended lower extremity traction, prone traction includes pelvic traction combined with ipsilateral lower extremity abduction traction, hyperextension suspended lower extremity traction, that is, supine longitudinal axis pelvic traction.

4. Acupuncture and Tuina Combined Traction Therapy

One hundred eighty patients with lumbar disc herniation were randomly divided into traction group, acupuncture group, combined group, and control group, with 60 cases in each group. The traction group was given simple traction therapy, one time/d, 20min/time. The acupuncture group and the combined group were combined with acupuncture and massage therapy on the basis of simple traction therapy. In acupuncture, the main points were Yaojiaji, Weiyang, Huantiao, and Zhibian, and acupoints were assigned according to the specific conditions of the patients. The needles were retained for 20 minutes once a day. The control group did not perform any treatment operation, and the results showed that the effective treatment rate of the treatment group was significantly better than that of the observation group and

the control group ($P<0.05$). The Treatment was given simple traction therapy, and the traction weight was 50%-60% of the patient's own body weight, 30 min/time, one time/d, for 30 days. On the basis of the acupuncture group and the combined group, acupuncture and massage were used. The acupuncture treatment mainly used acupuncture points such as Huantiao, Zhibian, Yaojiaji, Zusanli, etc., to make up and reduce the pressure. The bladder meridian and the buttocks are pressed, pressed, and rubbed. see Fig. 3.

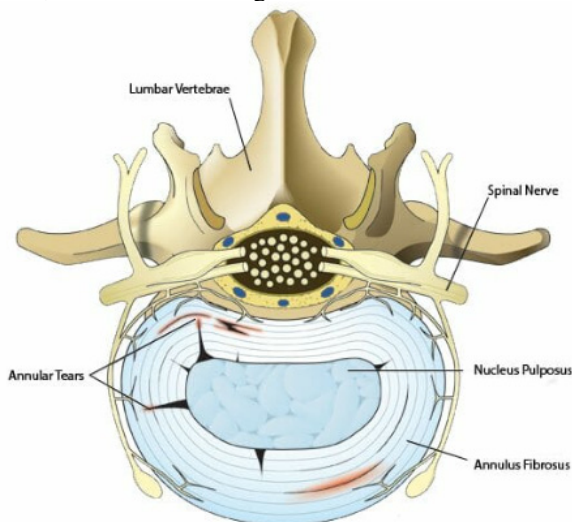


Fig 3. Acupuncture for the treatment of lumbar disc herniation

In this study, there was no significant difference in all aspects of patients in each group before treatment. After different treatments, the symptoms and signs of patients in each group were significantly improved, indicating that the above treatment methods have obvious Treatment for patients with lumbar intervertebral disc herniation. The effect, simple massage treatment or acupuncture treatment, the effect is not very different, but with the combination of the two, the treatment effect is obvious. The reason may be that although the simple lumbar traction can expand the intervertebral space of the diseased part so that the protruding nucleus pulposus is in a certain degree. In the last time, the compression and stimulation of nerve tissue are relieved, but good living habits and correct posture are required; otherwise, it is easy to relapse. In addition, simple massage or acupuncture treatment has very limited effects on the local stimulation of the body and the promotion of the absorption of inflammatory factors, while lumbar traction, external application of traditional Chinese medicine combined with acupuncture and traditional massage techniques can adjust the body as a whole, not only can it gradually relax. Resolve the adhesion between protrusions and nerve roots, reduce the compression and stimulation of the intervertebral disc on the local nerve roots, adjust the joint disorder, relatively expand the intervertebral foramen, and effectively improve the local blood circulation, promote the absorption of inflammatory edema in the lesions, and make the Qi and blood smooth. To fundamentally relieve the patient's pain. The mechanism of the above-mentioned effects may be implemented by inhibiting the effect of inflammatory mediators on the intervertebral disc and blocking the inflammatory response. This study found that serum inflammatory factors in patients with lumbar disc herniation remained at a high level, indicating that local inflammatory responses may persist in the process of nucleus pulposus compression and nerve tissue stimulation in patients

with lumbar intervertebral disc herniation. Participate in the pathophysiological process of lumbar intervertebral disc degeneration to some extent.

5. Results

Comparison of the clinical treatment effect of patients in each group After the first course of clinical treatment, most of the patients in each group were significantly relieved of their waist and leg pain symptoms, and the range of motion of the waist and the angle of straight leg raising were significantly increased. There was pain and discomfort in the waist and legs, but it was relieved after rest. After the second course of treatment, the clinical symptoms of the patients in each group were further improved, the pain symptoms basically disappeared, the straight leg raising could reach more than 70 degrees, and the quality of daily life was significantly improved. The clinical efficacy of each group of patients after active Treatment in different ways was obvious. It was found that the total effective rate (98.44%) of the acupuncture group and the combined group was significantly higher than that of the traction group (76.56%) and the control group (60%). On the basis of traction therapy, acupuncture therapy can effectively stimulate the root of the sciatic nerve segment to relieve pain symptoms, and combined with massage manipulation to change the soft tissue and the position of the spinal joints, the therapeutic effect is remarkable.

The difference between the traction group and the control group was statistically significant ($P<0.05$); there was no significant difference between the traction group and the acupuncture group, and the combined group ($P>0.05$). Compared with the control group, the acupuncture-moxibustion group and the combination group had statistically significant differences ($P<0.05$). It shows that the above treatment methods can effectively restore the blood circulation near the intervertebral disc of the patient, inhibit the production of local inflammatory factors, promote the production of anti-inflammatory factors, inhibit the inflammatory immune state of the patient, and effectively prevent the further Degeneration of the intervertebral disc of the patient. After the immune-inflammatory state of the patients was determined, they could achieve a better curative effect in analgesia and improve the clinical symptoms and signs of the patients, and the comprehensive curative effect of the combined treatment was better, and the Treatment was safe and reliable.

6. Discussion

Lumbar intervertebral disc herniation is a common clinical disease and frequently-occurring disease, which has the characteristics of high incidence and recurrence rate. The intervertebral disc tissue contains a large amount of extracellular matrix and a small number of cellular components. Lumbar 4-5 and lumbar 5-sacral one intervertebral disc herniation is more common, and there are many related studies on its pathogenesis, mainly including mechanical factors such as local compression and structural deformity and chemical factors such as local inflammatory response and autoimmune response. Factors stimulate its nerve roots and spinal ganglia to cause pain, and inflammatory response is considered to be one of the key pathogenic mechanisms. The herniated intervertebral disc tissue has obvious inflammatory changes and can produce many inflammatory cytokines, and these inflammatory

mediators may have an extremely important regulatory role in the process of intervertebral disc degeneration. Relevant studies have shown that there are a variety of inflammatory factors that can be secreted or synthesized by the herniated intervertebral disc tissue cells. These factors can reflect the body's inflammatory stress state and can act on nerve tissue to aggravate low back pain and sciatica. It reflects the lumbar intervertebral disc. It is an important evaluation index to highlight the patient's condition change. Medical experts generally believe that it has a good effect on intervertebral disc herniation by inhibiting the production of inflammatory factors and stimulating the production of anti-inflammatory factors. Blocking the inflammatory response may slow the process of disc degeneration, which could be a new breakthrough in the Treatment of lumbar disc herniation. The main methods for the Treatment of lumbar disc herniation are surgical Treatment and non-surgical Treatment. The purpose of the treatment is to eliminate the painful symptoms of the patient's lower back and legs as soon as possible. Since the surgical Treatment is mainly to remove the intervertebral disc or replace the intervertebral disc, the postoperative recurrence rate is high, and the patient often Degeneration of the adjacent intervertebral disc occurs after a few years, and some patients may need reoperation, which has a great impact on the patient's life and body and mind. Therefore, non-surgical treatment methods are basically used in clinical practice, and traditional Chinese medicine treatment is one of them. The most traditional non-surgical treatment methods mainly include lumbar traction, external application of traditional Chinese medicine, acupuncture, and massage. In this study, according to the TCM syndrome differentiation and treatment method, the control group was treated with the external application of drugs for promoting blood circulation, relieving pain, dispelling wind and dispelling cold, clearing blood vessels, and benefiting joints, as well as traction and functional exercise; the acupuncture group was treated with meridian-based medicine based on the treatment method of the control group. The acupuncture treatment method combining acupoints and local acupoint selection directly stimulates the nerves to release certain neurotransmitters so that the patient's meridians can be dredged, which can significantly improve the patient's muscle tension, relieve vascular spasm, and promote blood circulation, so as to achieve a solution. On the basis of the treatment method in the control group, the patients in the traction group massaged the corresponding parts of the patients, so that the muscle tissue of the patients could fully relax, effectively reducing the tension of the psoas muscle in the affected area, promoting the absorption of local inflammation, and change the spinal cord to a certain extent. The local compression relationship between the nucleus and the nerve root restores the stability of the spine and rebuilds the compensatory balance of the spine, fundamentally relieving nerve root compression and eliminating nerve root edema. However, a single traditional treatment not only requires a long course of treatment but also

has a poor curative effect. In clinical practice, massage therapy is the main treatment method, while other treatment methods such as acupuncture, traction, and external application of traditional Chinese medicine can achieve better therapeutic purposes.

7. Conclusion

Lumbar intervertebral disc herniation is a common disease in contemporary times, with various causes. Due to the fact that many sedentary jobs are currently required, the incidence rate is increasing year by year. The disease may cause sciatica, low back pain, and other symptoms, which seriously affect the patient's work, study, and daily life. Therefore, most patients seek medical treatment, but the treatment of lumbar disc herniation is very difficult. Although there are various treatment methods, a single treatment method, Complete remission is often difficult to achieve. Chinese massage combined with acupuncture in the Treatment of lumbar intervertebral disc herniation has a more significant clinical effect than a single conservative treatment. It can significantly inhibit the generation of local inflammatory factors in patients through a certain mechanism, promote the absorption of inflammatory mediators, and reduce the local inflammatory state. Therefore, the clinical symptoms of patients can be significantly improved, the comprehensive treatment effect is satisfactory to the patients, and the treatment method is safe and reliable, which has high practical value in clinical Treatment and is worthy of comprehensive promotion and application.

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