Research progress of traditional Chinese medicine conservative treatment of lumbar disc herniation with blood stasis and qi stagnation

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Abstract: Lumbar disc herniation is a common bone disease in clinical practice. At present, there are various treatment methods of western medicine and traditional Chinese medicine for the disease, such as physical rehabilitation, pain management, and surgical intervention, among which the use of traditional Chinese medicine conservative treatment of lumbar disc herniation can significantly relieve pain and have a significant effect. This article reviews the relevant literature in recent years from the perspective of the internal treatment of traditional Chinese medicine combined with acupuncture and external treatment of traditional Chinese medicine in the treatment of lumbar disc herniation, to provide a reference for clinical research and treatment of the disease.

Keywords: lumbar disc herniation; TCM internal treatment; TCM external treatment; TCM nursing techniques

Lumbar disc herniation [1](LDH) refers to the structural changes of each part of the intervertebral disc (nucleus pulposus, annulus fibrosus, and cartilage plate) due to trauma, degenerative diseases, and other reasons. The annulus fibrosus is kyphotic or fractured, and the nucleus pulposus tissue is disposed from the ruptured annulus fibrosus. As the spinal cord passes behind the intervertebral disc, when the protruding tissue compresses the spinal nerve or cauda equina nerve, it causes symptoms such as back pain, leg pain, and incontinence. Patients had limited lumbar movement, needle-like pain in the waist, or radiating pain from the waist to the lower limbs. It is highly prevalent in industrialized countries, with at least 30% of the population suffering from it at some point in their lives [2]. With the aging of the population, the incidence of intervertebral disc disease is increasing proportionally, and intervertebral disc disease is the leading cause of chronic low back pain and disability in the world's aging population [3,4]. The ancestral medicine believed that the origin of low back pain was kidney deficiency, and the basis of its pathogenesis was labor injury to the kidney, insufficient blood supply, insufficient blood nourishment of tendons, and pain caused by compression and inflammatory edema of tissues. It was pointed out in Zhu Bing Yuan Hou Lun of Sui and Tang Dynasties that low back pain had five influencing factors: kidney deficiency, wind, and cold, labor, falling, and cold dampness. At present, lumbar disc herniation is divided into four types in traditional Chinese medicine: blood stasis and qi stagnation type, cold-dampness obstruction type, dampness and heat obstruction type, and liver and kidney deficiency type. Among them, blood stasis and qi stagnation type are the most common. Blood stasis and qi stagnation type refer to a recent history of lumbar trauma, lumbago and leg pain with localized pain, tingling or numbness, stiff waist, difficulty in prone movement, tenderness, dark purple tongue, or ecchymosis, thin white or yellow tongue coating, heavy and astringency or strung pulse [5].

The current treatment options, such as physical rehabilitation, pain management, surgical intervention, and the use of traditional Chinese medicine conservative treatment of lumbar disc herniation can significantly relieve pain. The commonly used conservative treatment methods include oral Chinese medicine and external Chinese medicine treatment, including acupuncture and moxibustion therapy, Chinese medicine fumigation, Chinese medicine wax therapy, etc., but the single treatment method has a long time and limited effect. Two or more treatment methods are used in clinical practice. In recent five years, combined treatment or new technology has been used in the treatment of lumbar disc herniation with qi stagnation and blood stasis type.

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1. Oral Chinese medicine combined with acupuncture

The white paper on Traditional Chinese Medicine in China, published by The State Council Information Office in December 2016, pointed out that traditional Chinese medicine has a history of nearly 5,000 years. Chinese decoction originated in the Shang Dynasty (1600-1046 BC), in the Eastern Han Dynasty, Shang Han Za Bing Lun (Treatise on Cold Pathogenic and Miscellaneous Diseases) discussed the dialectics principles and rules of disease etiology, treatment, and prevention. Shennong Bencao Jing (Shennong's Classic of Materia Medica) summarizes the compatibility of emperors and ministers, four qi and five tastes, which plays a guiding role in safe drug use and syndrome differentiation and treatment. In the Ming Dynasty, Li Shizhen's Compendium of Materia Medica scientifically classified drugs and innovated the theory and practice of TCM. By 2019, 183 countries and regions were using TCM.

1.1 Tao-hong Siwu Decoction combined with acupuncture and Tuina

The main prescription of Jiawei Taohong Siwu Decoction is 10g peach kernel, 15g safflower, Angelica, radix Paeoniae, and Chuanxiong, which can promote blood circulation, remove blood stasis, and reduce the degree of "stasis". Acupuncture and moxibustion have the functions of activating meridians, promoting blood circulation, and relieving pain, and can eliminate local edema and inflammation. It is a safe and non-side-effect method for pain relief. As of 2019, 103 Member States have recognized the use of acupuncture, and 18 countries have included acupuncture in the medical insurance system [6]. Chinese massage can use manipulation to relax the muscle soft tissue around the affected area and relieve pain by relieving the tension of the muscles. Xie Baoquan [7] treated 99 patients with L5-S1, Shenshu, Jiaji, Qihaishu, Weizhong, Waiqiu, Huantiao, and Zusanli, combined with modified Taohong Siwu decoction. In the study, according to the severity of the disease symptoms, the acupoints were selected according to the symptoms, and the prescription was added and reduced according to the symptoms. The research findings were consistent with the research results of Zhu Jintu [8] et al. Traditional Chinese medicine combined with acupuncture and tuina can nourish the nerve and reduce the response level of inflammatory factors. Liu Han [9] studied that oral administration of Taohong Siwu decoction had a prominent role in dilating blood vessel flow velocity, promoting bone regeneration, and promoting lumbar nerve function recovery.

1.2 Shentongzhuyu decoction combined with acupuncture and tuina

The main prescription of Shentongzhuyu Decoction is Dilong 15g, Sichuan Niuxi 15g, Angelica 15g et al. Qiu Eurodian [10] in the control group was treated with conventional western medicine, and in the observation, group was treated with Shentongzhuyu decoction for one month. Compared with western medicine treatment, conservative Chinese medicine treatment can reduce waist pain and improve quality of life. In the study of Wang Yuanjun [11], based on taking Shentongzhuyu decoction, combined with acupuncture and massage therapy, the prescription was adjusted according to the patients with kidney Yin deficiency and qi deficiency. There were 11 main acupuncture points, acupuncture and tuina for 15 days, and oral Chinese medicine for one month. Zhang Yunliang [12] et al. improved an innovative black plaster application based on Shentongzhuyu decoction for two courses, one course of treatment for 10 days, which has the effect of dispelling wind and dedampness, promoting qi and relieving pain.

1.3 Yaobi-zhu yu-zhong decoction combined with Tiaoji-Tongdu acupuncture

The Tiaoji Tongdu acupuncture method is based on the combination of Jiaji acupoints and the governor vessel points, emphasizing the regulation of the governor's vessel and the balance of Yin and Yang [13]. Dong Wei [14], Huang Wei [15], and other researchers have shown significant effects in the treatment of cervical spondylosis. The lumbar spine and cervical spine both belong to spinal diseases. Therefore, Wu Ping [16] et al. selected 192 patients with lumbar disc herniation, 96 in the Tiaoji Tongdu acupuncture group and 96 in the conventional acupuncture group, and both were treated for 14 days. Cheng Ming and Wu Yangling [17] et al. used Yaobi-Zhuyu-Zitong decoction combined with Tiaoji-Tongdu acupuncture for clinical observation for two months, showing a good clinical recovery effect on the lumbar spine. Ma Yinmei et al. [18] treated 91 patients with Duhuo Jisheng decoction combined with Tiaoji Tongdu acupuncture, and the effective rate was 75.56% in the control group and 91.30% in the observation group, showing significant improvement. Yaobi-zhu yu-Zhong decoction combined with Tiaoji-Tongdu acupuncture has a highly limited rate, a longer course of treatment, a

significant effect, and a high degree of clinical reliability compared with other combined methods. A questionnaire can be added in the middle of the study, so that patients can know their disease condition and improve their cooperation with researchers. Clinical researchers can also understand the progress of this study and whether the expected goal can be achieved, to make timely adjustments.

1.4 Self-made decoction combined with warm acupuncture

Simple acupuncture and moxibustion are not ideal in clinical practice. Warm acupuncture and moxibustion are adopted to warm up and dissipate cold and dampness. The heat is transmitted to the needle body through the handle and permeates into the skin, to achieve the effect of tonifying qi and blood, removing blood stasis, and relieving pain. The operation method is to insert a filiform needle into the acupoint, add a moxa cone 2 to 3cm long to the handle of the needle and ignite it. Zhao Man [19] et al. combined oral Chinese medicine with warm acupuncture and moxibustion. The main prescription was Xiangfu, Yanhu Suo, Angelica, Danshen, and mulberry, 12g each, peach kernel, 9g each, Qingpi and Tangpi, 6g each. The acupoints of warm acupuncture and moxibustion were selected as Shenshu, Zhibian, Dachangshu, Weizhong, and Fengshi for two weeks. Tang Bo [20] et al. used warm acupuncture combined with internal and external applications of traditional Chinese medicine decoction, which also had good clinical efficacy in patients with knee osteoarthritis caused by wind-cold-damp obstruction. Zhang Yuchang [21] combined warming acupuncture and moxibustion with Shentong Zhuyu decoction has a remarkable effect, which can reduce the symptoms by 70%, and the patient's low back pain can be alleviated or even disappeared. In the research progress of warming acupuncture and moxibustion in the treatment of lumbar disc herniation, it has been concluded that the efficacy evaluation criteria of various clinical studies are not objective [22]. The authors believe that new evaluation scales can be formulated by combining the treatment methods of traditional Chinese and western medicine. For patients with mild disease, the treatment is expected to return to normal waist activity, patients with advanced disease can control the disease and improve the symptoms, and patients with severe disease can be relieved after treatment, but from the point of view of recurrence rate, severe patients will be higher than mild patients and patients with advanced disease, in clinical research should be added a certain treatment for patients with different stages of disease recovery. Make a score. In addition, Zhu Bin et al. [23] also had the effect of promoting qi and activating blood circulation in patients with lumbar disc herniation caused by cold-damp obstruction by using the principle that heat from Moxibustion is transmitted to the body through the needle body to warm meridians and dissipate cold. He Jin and Tang Dongxin et al. [24] treated Miao medicinal liquid combined with warm acupuncture and moxibustion, and found that there were few complications, the effective rate was 96.67%, and the lumbar spine function recovered well. The author believes that Miao medicinal liquid has regional characteristic therapy and belongs to the unique preparation of this region, and it is difficult to promote it in other regions.

2. External treatment of traditional Chinese medicine combined with application, fumigation and wax therapy

2.1 New technology of traditional Chinese medicine plaster

Traditional plaster has the advantages of high content of active ingredients and precise administration, but it is easy to fall off, contaminated clothing and is prone to skin allergic reactions, which also reduces patient compliance. Compared with traditional plaster, Babu plaster has obvious advantages, such as a large drug load, accurate measurement, and repeated application. Guo Zibin [25] found in the study of lumbar Babu ointment in the treatment of 129 cases of lumbar disc herniation with qi stagnation and blood stasis, the skin reactivity of Babu ointment group was lower than that of ordinary blood-promoting analgesic ointment, and the patients' acceptance was improved. Traditional Chinese medicine (TCM) directional penetration therapy is a combination of traditional Chinese medicine plaster and modern new technology. The acupoints are determined according to the symptoms of the patients, and the self-made prescription is applied to the physiotherapy patch. Cao Zhihong [26] treated lumbar disc herniation with traditional Chinese medicine and then used traditional Chinese medicine. The effective rate of the study group was as high as 97.14%, which was significantly higher than the 77.14% of the control group. Based on the treatment of traditional Chinese medicine, the treatment of traditional Chinese medicine can improve blood circulation, promote drug absorption, and improve the curative effect.

2.2 Traditional Chinese Medicine fumigation

2.2.1 TCM fumigation combined therapy

A local hot compress can reduce inflammation and pain, promote blood circulation and remove blood stasis through the conduction of a heat source. At present, Chinese medicine fumigation combined with moxibustion, extracorporeal shock wave, and other technologies has certain clinical effects in clinics. Zhang Weiwei and Guo Shasha [27] 45 patients were treated with TCM fumigation and moxibustion, all three groups were treated for two weeks. The JOA score and VAS score of group C were concluded. Chinese medicine fumigation combined with moxibustion has a better therapeutic effect. Extracorporeal shock wave therapy has the advantage of rapid pain relief in the treatment of soft tissue injury. It has been applied to chronic bone and joint pain, scapulohumeral periarthritis, plantar myositis, and other inflammatory diseases. Shen Yihong and Zhu Li et al. [28] also made new progress in combined treatment. 120 patients with qi stagnation and blood stasis type were treated with external pulse therapy for 20 days. The author believes that the advantages of extracorporeal shock wave therapy are that it is a non-invasive treatment with high safety and is suitable for most patients. The sample size can be expanded and more reliable data can be obtained. As for the control of temperature in the process of TCM fumigation treatment, Bi Wenqing [29] has a more specific research conclusion: high-temperature treatment is better than low-temperature treatment, but considering the human body's tolerance to fumigation treatment, the conclusion shows that 43°C can prevent patients from feeling skin burning, and can also accelerate metabolism, to promote blood circulation in the treatment of patients with qi stagnation and blood stasis.

2.2.2 New technology of traditional Chinese medicine fumigation

Traditional Chinese medicine iontophoresis technology [30] refers to a new technology in which drugs are introduced into the skin through the skin biofilm using direct current through the positioning electrode sheet to complete the circulation of body fluid. Guo Chuang and Li Yanqiu [31] et al. applied TCM fumigation combined with TCM iontophoresis technology to clinical practice, which can play a role both inside and outside. Traditional Chinese medicine iontophoresis is a new clinical innovative technology, which saves manpower and is simple to operate. In the past five years, there are few kinds of research on the nursing technology of traditional Chinese medicine fumigation combined with traditional Chinese medicine iconography. With the number of patients with lumbar disc herniation increasing year by year, we should give strong support to new technology, and encourage innovation or learning-related advanced nursing technology on this basis.

2.3 Wax therapy of traditional Chinese Medicine

Chinese medicine wax therapy technique [32] is a kind of external treatment method of applying hot wax at the same time as traditional Chinese medicine treatment under the guidance of traditional Chinese medicine theory, which is a common nursing technique of traditional Chinese medicine. It has warm heat and mechanical compression, and its chemical composition can nourish the skin and relieve pain and spasticity [33]. To solve the problem of dependence caused by the long-term use of western medicine, Huang Yu et al. [34] studied the characteristic external treatment of traditional Chinese medicine. The self-made Tianqi drop and wine wet compress was used to relieve qi and pain, and then the wax therapy of traditional Chinese medicine was applied to it. The combination therapy of Dida wine and wax therapy of traditional Chinese medicine can improve the pain symptoms of patients with lumbar disc herniation. Tang Zhenrong and Qiu Yuneng [35] conducted a study on 80 patients with qi stagnation and blood stasis type. The patients in the control group received routine rehabilitation nursing, while the patients in the observation group received routine nursing and wax therapy of traditional Chinese medicine. The medicinal materials in the prescription were packed into sterile medicine bags and boiled in a medicine pot for 20 minutes to remove water. After one month of treatment, the whole blood viscosity (60/s, 10/s) and plasma viscosity of the observation group were lower than those of the control group. The VAS score of the observation group was significantly decreased, and the JOA score of the observation group was increased. In the study, Jing Zipeng [33] evaluated all the conditions of each patient with lumbar disc herniation of blood stasis and qi stagnation who participated in the intervention of wax therapy assisted by traditional Chinese medicine painting and summarized the records. The lumbar disability Index (ODI) was used to evaluate the improvement of symptoms in patients with lumbar disc herniation of gi stagnation and blood stasis. The higher the evaluation score, the more obvious the corresponding symptoms of the patients were.

3. Summary and Prospect

The lumbar disc supports connects and cushions the lumbar spine. Lumbar disc herniation occurs based on degenerative changes in the intervertebral disc. Pain from lumbar disc herniation is an elusive symptom with a variety of causes, triggers, maintenance factors, and consequences, making it a difficult clinical problem to challenge.

TCM monotherapy may be more effective than other interventions. but no definite conclusion can be drawn and more high-quality large-scale studies are needed to clarify this issue. The application of TCM nursing technology can reduce the dependence of patients on analgesic drugs. Therefore, TCM treatment based on TCM theory has a good effect in relieving muscle tension and joint release, improving lumbar and leg pain, radiculopathy, stiffness, activity discomfort, and related diseases. Integrated traditional Chinese and western medicine treatment has also been recognized by most people. Clinical observations in recent decades have reported that more and more evidence has proved that most patients do not need surgical treatment. This article reminds us to pay attention to lumbar disc herniation. In the clinical practice of spinal diseases, how to make full use of our TCM nursing knowledge and TCM nursing technology to further improve the quality of nursing for patients with lumbar disc herniation is the problem we need to pay attention to at present.

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