

Research Progress on Traditional Chinese Medicine Treatment of Lumbar Facet Joint Disorder

Shuaihua Zhang¹, Ruituo Zha¹, Xiaoqiang Su², Xiangyang Wang^{2,*}

¹Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

²Xi'an Hospital of Traditional Chinese Medicine affiliated to Shaanxi University of Chinese Medicine, Xi'an 710021, Shaanxi, China

*Correspondence Author

Abstract: Lumbar facet joint disorder (LFJD) is a common orthopedic disease, mainly manifested as lumbar pain, in recent years, people are affected by the working environment and sports, the incidence of which tends to increase and tends to be younger, this paper collects the relevant literature on lumbar facet joint disorder, elaborates on the etiology, diagnosis, and treatment of LFJD and takes measures to consolidate the effect of the treatment and prevent recurrence of the disease. We will also take measures to consolidate the therapeutic effect and prevent the recurrence of the disease.

Keywords: Lumbar facet joint disorder, Etiology, Pathogenesis, Traditional Chinese medicine treatment.

1. Introduction

Lumbar spondylolisthesis, also known as lumbar spondylolisthesis, acute lumbar posterior synovial inlay [1], occurs when the lumbar spondylolisthesis occurs due to improper lumbar exertion, sprains, or external impacts, and the main manifestation of the disease is severe pain in lumbar and hip area or pain in lower limbs, and limitation of lumbar vertebrae and lower limbs activities [2]. The incidence of this disease is about 5% to 35%, mainly in people over 40 years old, and there are more male patients than female.

2. Etiology and Pathogenesis

2.1 The Etiology and Pathogenesis of Lumbar Facet Joint Disorder in Traditional Chinese Medicine

The disorder of one vertebra and one joint belongs to the categories of "muscle injury", "Bi syndrome", "bone misalignment, and tendon groove" in traditional Chinese medicine. It is often caused by trauma and shock, manifested as lower back pain and limited mobility. The "Essential Principles of the Zhenggu Heart Method" in the "Golden Mirror of the Medical School of Medicine" states: "If one falls and falls, causing the bone seam to open incorrectly and the qi and blood to stagnate, swelling becomes pain." The "Ling Shu" records: "If the blood is in harmony, the meridians will flow, the yin and yang will be restored, the muscles and bones will be strong, and the joints will be clear and smooth." The "Su Wen" points out that "the tendons and tendons mainly bind the bones and benefit the joints." There is also the "Chao Shi's Treatise on the Origins of Various Diseases" which states: "The liver mainly binds the tendons and hides blood, the kidneys mainly store the bones and produce marrow, and the deficiency of labor will damage the blood and consume the marrow, thus injuring the tendons and bones. It will affect the liver and kidneys. The spine is crossed by the Du meridian, and the Du meridian governs the Yang energy throughout the body. Any damage to the Du meridian will inevitably affect the meridians and organs of the corresponding segment. Injury refers to the blockage of meridians, stagnation of qi and blood, which results in the inability of muscles and bones to

receive normal nourishment from qi and blood. If the blockage occurs, it causes pain and exacerbates the damage to the muscles and bones, leading to severe pain and movement obstruction, resulting in this disease [3].

2.2 The Pathogenesis of Lumbar Spondylolisthesis in Western Medicine

According to western medicine, lumbar small joints are composed of upper and lower articular processes and their adjacent soft tissues, with articular cartilage attached to their articular surfaces, which is the only synovial joint of lumbar vertebrae. When the lumbar region is suddenly stressed or excessively twisted, the normal anatomical structure of the lumbar small joints will be changed, and the joint space will become asymmetric, resulting in uneven stress on the articular eminence joints and synovial embedded phenomena, which will manifest muscle spasm and pain symptoms [4]. Therefore, the pathological mechanism of lumbar spondylolisthesis involves compensatory changes in the overall biomechanics of the spine, such as muscles, ligaments, joints, etc. Once lumbar spondylolisthesis occurs, the clinical symptoms tend to be more pronounced, which seriously affects the quality of life of patients.

3. Diagnosis

There is no uniform standard for lumbar spondylolisthesis, and the following diagnostic criteria are formulated according to the previous literature [5]: (1) history of bending and carrying heavy objects or spraining the lumbar region or prolonged sitting and standing; (2) history of obvious lumbar pain and activity limitation; (3) unilateral or bilateral lumbar spondylolisthesis joints pressure and pain, muscle spasm in the surrounding muscles, and negative straight-leg elevation test; (4) lumbar spine X-ray frontal and lateral films show that there is no obvious abnormality of lumbar vertebrae, and the articular synovial joints are asymmetric or disordered, and the lumbar vertebrae are asymmetric or disordered. Asymmetry or disorder of synovial joints, shallow or lost physiological curvature of lumbar spine; (5) CT of lumbar spine shows hyperplasia or malalignment of synovial joints, and sclerosis of subchondral bone.

4. Treatment

4.1 Chinese Medicine Characteristic Manipulation Treatment

Chinese medicine manipulation therapy can optimize the mechanical properties of muscle tissue, promote the repair of damaged muscles, restore the stability of the joints, effectively relieve the pain of patients, and play the role of tendon relaxation, qi activation and blood circulation, spine adjustment and other functions, which is a physiological adjustment process. Zhang Congcong et al [6] randomly divided 48 cases of lumbar spine small joint disorder patients who met the inclusion criteria into a test group and a control group, with 24 cases in each group. The test group and the control group were treated with the two treatment methods of fixed-point inclined wrench and traditional inclined wrench, and the clinical effectiveness rate of the test group was 92% and that of the control group was 62%. Compared with the traditional inclined wrench, the fixed-point inclined wrench has a concentrated force, high success rate, strong operability, and can greatly reduce the patient's lumbar pain, and improve lumbar mobility, and it has a better clinical efficacy for the treatment of the lumbar facet joint disorders. Wu Ruihua [7] and other selected lumbar spondylolisthesis disorder patients 72 cases, observation group: Diannan Su's orthopedic manipulation for treatment; control group: the use of Wang Hualan edited "Tui Na Therapy" orthopedic therapy for treatment. Results: The total effective rate was 94.44%; the total effective rate was 88.89%. Conclusion: The total effective rate of Diannan Su bone-setting maneuver was higher than that of the conventional bone-setting maneuver group, and the clinical data showed that the maneuver was effective and safe, which provided validation and a basis for the clinical validity of Diannan Su bone-setting maneuver. Chen Yue [8] et al. divided 72 cases of lumbar spine small joint disorders that met the diagnostic criteria into 2 groups by using the randomized numerical table method, 34 cases in the experimental group used the pelvic spinal manipulation method, and 32 cases in the control group used the conventional manipulation method. The total effective rate of the experimental group was 91.18%, and the total effective rate of the control group was 81.25%. The therapeutic effect of the pelvic adjusting and chiropractic group has certain advantages over the conventional massage techniques, and it is safe and effective. Self-weight suspension traction under positioning rotary push method [9], 116 patients with lumbar spondylolisthesis were divided into the treatment group and the control group, each with 58 cases. The treatment group was treated with self-weighted suspension traction under positioning rotary push method, and the control group was treated with conventional lying lumbar spine oblique wrench method. The total effective rate was 96.55% in the treatment group and 93.10% in the control group, and the efficacy of self-suspension traction with localized rotary thrusting was better than that of conventional horizontal lumbar oblique wrenching in the treatment of lumbar spondylolisthesis.

4.2 Manipulation Combined with Acupuncture

Acupuncture can improve vascular permeability, accelerate the discharge and absorption of inflammatory substances, and

promote the repair of ligamentous muscles and other tissues; in addition, it can also increase the content of morphine in neurotransmitters, and play the role of analgesia [10]; Acupuncture lumbar pinch spine, the large intestine Yu and other points can make the lumbar local antispasmodic and pain relief, and the ring jump acupuncture point is good at treating the lumbar crotch pain and can not be turned sideways. "Waist and back commission in the request" of the commission in the point, with the treatment of acute low back pain clinical experience point Houxi point, to millimetre needle diarrhea Shu meridians and collaterals, elimination of evil spirits pain, acupuncture and moxibustion combined with manipulation therapy can significantly improve the clinical effect. Cui Guohao [11] et al. selected 80 cases of lumbar spondylolisthesis, the control group was treated with acupuncture, and the treatment group was treated with Long's orthopedic therapy combined with acupuncture, the total effective rate of the treatment group was 95.0%, and the total effective rate of the control group was 80.0%, and the efficacy of the Long's orthopedic therapy combined with acupuncture in treating lumbar spondylolisthesis was remarkable, and it could effectively alleviate the symptoms of lumbar pain in patients with lumbar spondylolisthesis and improve the balance of the muscles and the function of lumbar back movement. It can effectively reduce the symptoms of lumbar back pain, improve the balance of muscle groups and the function of lumbar back movement. Wang Rongxiang [12] and others randomly divided 60 patients with lumbar facet joint disorder into two groups. The control group (28 cases) was given conventional Western medicine treatment, and the experimental group (32 cases) was given Chinese medicine acupuncture combined with bone massage treatment. Comparing the total effective rate of treatment of the two groups, the experimental group was significantly higher, and the difference was statistically significant ($P < 0.05$), and Chinese medicine acupuncture combined with bone massage treatment of lumbar spondylolisthesis disorder can effectively relieve patients' pain, improve dysfunction, and have obvious therapeutic effects. Chen Xinpeng [13] selected 72 patients with lumbar small joint disorder, control group patients were treated with electroacupuncture, and observation group patients were treated with traditional Chinese medicine bone-setting manipulation combined with electroacupuncture. The overall efficacy of the two groups of patients was higher than that of the control group, and traditional Chinese medicine bone-setting manipulation combined with electroacupuncture in the treatment of patients with lumbar small joint disorder can significantly improve the pain condition of the patient, reduce the patient's dysfunction, and correct the patient's small joint disorder, thus effectively improving the patient's pain, improving the patient's function, and correcting the patient's small joint disorder. The combination of Chinese orthopedic manipulation and electroacupuncture in the treatment of lumbar spondylolisthesis can significantly improve the patients' pain, reduce the patients' dysfunction, and correct the patients' small joint disorders, thus effectively improving the overall treatment effect.

4.3 Acupoint Injection

Acupuncture point injection, can improve the therapeutic effect, so that the drug quickly reaches the local tissues, thus

effectively relieving nerve irritation, soothing the damaged soft tissues, helping to alleviate the dysfunction, and facilitating recovery^[14]. Liu Xiaolan^[15] and others selected 70 cases of lumbar spondylolisthesis, the control group was treated with acupuncture, and the treatment group was treated with acupuncture with Zhengqing Fengqinning Injection Acupuncture Point Injection, the effective rate of the control group was 82.86%, and the effective rate of the treatment group was 94.2%, the treatment of lumbar spondylolisthesis on the basis of acupuncture with Zhengqing Fengqinning Injection Acupuncture Point Injection is of precise efficacy, and it can effectively alleviate the clinical symptoms and improve functional disorders. Song Bin^[16] et al. selected 61 patients with lumbar small joint disorders as the research object, and used Chinese medicine acupoint injection (Xiang Dan and Yi Pain Shu) with orthopedic manipulation and reset, 48 cases (78.69%) were cured, 11 cases (18.03%) were effective, 2 cases (3.28%) were improved, and the effective rate was 100%. The key to treating this disease lies in correcting small joint misalignment and eliminating aseptic inflammation and edema. Traditional Chinese medicine lumbar vertebrae acupoint injection, to achieve the role of understanding the surface, reduce swelling, pain and blood circulation and eliminate blood stasis, so that the lesion area of the collateral pain and blood circulation and aseptic inflammation and edema can be subsided^[17]. After 3-5 day of traditional Chinese medicine acupoint injection, the lumbar muscles were loosened, the mobility increased, and then the synovial embeddedness was lifted by orthopedic manipulation, which achieved the purpose of clinical treatment.

4.4 Other Treatments

Wu Yuheng^[18] and others investigated the effect of using bone-splitting qili capsule combined with lumbar intervertebral joint block to treat lumbar small joint disorder. Selected 128 patients with lumbar facet joint disorders, lumbar intervertebral joint block was given to the control group, and the treatment group was added with bone-splitting qili capsule, which can effectively reduce the symptoms of patients and improve the cure rate and efficacy. Huang Yong^[19] explored the clinical efficacy of lumbar small joint disorders treated with the combination of the oblique wrench method, 64 patients with lumbar small joint disorders were selected, and the treatment group used the modified oblique wrench method and the external use of lumbar small joint disorders, while the control group used the oblique wrench method and the oral celecoxib capsule, the total effective rate of 93.3% for the treatment group and 77.4% for the control group, and the total effective rate of 93.3% for the treatment group and 77.4% for the control group, and the total effective rate of 93.3% for the control group. The total effective rate was 93.3% in the treatment group and 77.4% in the control group.

5. Summary and Prospect

In summary, Chinese medicine has unique advantages in the treatment of lumbar spondylolisthesis. Chinese medicine focuses on the concept of wholeness, emphasizes that human beings are a unified whole, and uses manipulation, acupuncture, acupoint injection, external treatment or a

combination of treatments in the clinic. From the existing clinical studies, the efficacy of Chinese medicine in treating lumbar spondylolisthesis is accurate compared with Western medicine. The diagnostic standard of this disease is not yet unified, and the treatment has not yet formed a unified treatment standard, which needs to be further studied in these aspects. We have also achieved good results in clinical use of external plasters, oral medications, acupuncture and massage, appropriate exercise and correction of poor posture, which indicates that the prognosis of this disease is relatively good, but after recovery should be strengthened to prevent, avoid sedentary standing, strengthen the lumbar back muscle exercise, etc., so as to achieve the combination of prevention and treatment to prevent recurrence of the disease^[20]. Focusing on the overall concept, the unity of man and heaven, and letting nature take its course, Chinese medicine is profound and profound, and it still requires us to continuously explore in clinical diagnosis and treatment in order to give full play to the advantages of Chinese medicine.

Fund Project

Study on the Effects of Erxian Decoction on IL-1, IL-6, TNF α and Heart Rate Variability Analysis in Patients with Postmenopausal Osteoporosis of Kidney Yang Deficiency Type, Shaanxi Provincial Department of Science and Technology Project No. 2022SF-112.

References

- [1] Zhang Mingcai, Du Guoqing, Yuan Wei'an, et al. Observation on the therapeutic effect of acupuncture at the "back pain point" combined with lumbar bone dislocation technique for the treatment of lumbar facet joint disorder [J]. *Shi Zhen Traditional Chinese Medicine*, 2024, 35 (01): 137-140.
- [2] Li Yiran. Sudden back pain and lumbar facet joint disorder [J]. *Jiangsu Health Care*, 2022, (12): 26-27.
- [3] Hou Xiaozhou. Exploring the establishment and related applications of radiomics for lumbar facet joint disorders based on the theory of "tendon bone" [D]. *Chinese Academy of Traditional Chinese Medicine*, 2024.
- [4] Huang Ping, Lu Xuan, Qi Weichen, et al. Motion and dynamic characteristics of lumbar facet joint disorder [J]. *International Journal of Orthopedics*, 2022,43 (06): 385-391.
- [5] He Zhiliang, Wang Decheng, Zhang Hui. Clinical efficacy analysis of spinal fixed-point rotation reduction combined with small needle knife release in the treatment of lumbar facet joint disorder [J]. *Chinese Journal of Integrative Surgery*, 2019,25 (06): 991-997.
- [6] Zhang Congcong, Liu Aifeng, Shi Jia, et al. A randomized controlled study on the treatment of lumbar facet joint disorders using fixed-point oblique manipulation method [J]. *Journal of Tianjin University of Traditional Chinese Medicine*, 2023, 42 (01): 29-34.
- [7] Wu Ruihua. Clinical efficacy observation of Su's orthopedic manipulation in the treatment of lumbar facet joint disorder in southern Yunnan [D]. *Yunnan University of Traditional Chinese Medicine*, 2023.
- [8] Chen Yue. Clinical study on the treatment of rotational lumbar facet joint disorder with pelvic and spinal

- adjustment method [D]. Yunnan University of Traditional Chinese Medicine, 2023.
- [9] Satu Rilatu, Chaolu, Sakiratu, Haiqingchun, Baoqingshan. Clinical observation on the treatment of lumbar facet joint disorder with self weight suspension traction and positioning rotary pushing method [J]. Chinese Journal of Ethnic Medicine, 2022, 28 (05): 42-44.
- [10] Chen Xinpeng. Clinical Observation of Traditional Chinese Medicine Orthopedic Techniques Combined with Electroacupuncture for the Treatment of Lumbar facet Joint Disorder [J]. Guangming Traditional Chinese Medicine, 2020,35 (15): 2357-2358.
- [11] Cui Guohao, Yu Xiaoyu, Zhang Zhikai, et al. Clinical Observation of Long's Orthopedic Therapy Combined with Acupuncture for the Treatment of Lumbar facet Joint Disorder [J]. Guangxi Traditional Chinese Medicine, 2023, 46 (03): 36-39.
- [12] Wang Rongxiang, Chen Yifei, Jiang Huazhong. Clinical effect of acupuncture and moxibustion combined with bone setting massage in the treatment of lumbar facet disorders [J]. Inner Mongolia Traditional Chinese Medicine, 2020, 39 (08): 132-133.
- [13] Chen Xinpeng. Clinical Observation of Traditional Chinese Medicine Orthopedic Techniques Combined with Electroacupuncture for the Treatment of Lumbar facet Joint Disorder [J]. Guangming Traditional Chinese Medicine, 2020,35 (15): 2357-2358.
- [14] Zhang Jiahua. Clinical observation on acupuncture combined with acupoint injection of Zhengqingfeng Tongling injection for the treatment of 50 cases of lumbar disc herniation [J]. Chinese Folk Therapy, 2019, 27 (14): 19-20.
- [15] Liu Xiaolan, Meng Deliang. The bell rings Clinical efficacy of acupuncture and moxibustion combined with point injection of Zhengqingfengtongning injection in the treatment of lumbar facet joint disorder [J]. Inner Mongolia Traditional Chinese Medicine, 2021, 40 (07): 124-125.
- [16] Song Bin, Yu Zijiang, Guo Jian. Acupoint injection combined with orthopedic manipulation for the treatment of lumbar facet joint disorder [J]. Journal of Surgical Management, 2010,19 (01): 37.
- [17] Qu Yan. Perioperative nursing care of patients with thoracolumbar vertebral fractures [J]. Journal of Surgical Management, 2008, 17 (3): 209.
- [18] Wu Yuheng. Jiegu Qili Capsules Combined with Lumbar Intervertebral Joint Block for the Treatment of Lumbar Small Joint Disorders [J]. Clinical Medical Literature Electronic Journal, 2019, 6 (18): 13-14.
- [19] Huang Yong, Zhou Yingjie. Observation on the therapeutic effect of Shujin Huoxue Qutong ointment combined with improved oblique manipulation method in the treatment of lumbar facet joint disorder [J]. Traditional Chinese Medicine Guide, 2018, 24 (04): 90-92.
- [20] Zhu Jinghua. Prevention and treatment of lumbar facet joint disorders [J]. Athletics, 2022, (03): 84.