

Research progress of Huangqi Guizhi Wuwu Decoction in the treatment of lumbar protrusion

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Abstract: Astragalus Guizhi Wuwu Decoction is a special prescription for treating blood arthralgia in Zhang Zhongjing's Synopsis of the Golden Chamber. According to the theory of traditional Chinese medicine, it has the effects of regulating and nourishing the health, qi and blood. Modern experimental studies have confirmed that it has many effects, such as immune regulation, influence on hemorheology, anti-oxidative damage, promote nerve repair, inhibit inflammation and oxidative stress, etc. The author's instructor and folk traditional Chinese medicine use Huangqi Guizhi Wuwu decoction can often achieve good curative effect, but the relevant experimental studies are few. Therefore, from the perspective of clinical application, we summarize the experience of others in the treatment of lumbar disc herniation with this prescription, so as to provide reference for subsequent clinical application and experimental research.

Lumbar disc herniation (LDH) is a common multiple disease in orthopedics that leads to low back and leg pain. Lumbar disc herniation (LDH) is characterized by various degrees of lumbar and leg pain and/or numbness, and the leg pain is worse than low back pain, and the movement disorder of both lower limbs is the main clinical manifestation [1]. The occurrence of LDH is mainly caused by the compression of lumbosacral nerve roots and cauda equina nerve caused by disc degeneration [2]. Multiple lumbar sprains and excessive weight bearing are the main causes of lumbar disc herniation. Excessive compression of the intervertebral disc or rupture of the annulus fibrosus caused by severe trauma may also cause lumbar disc herniation. In severe cases, the daily work and rest will be seriously affected [3]. It belongs to the category of Chinese medicine "arthralgia", "low

back and leg pain". In recent years, long-term clinical observation has been carried out on a large number of LDH patients at home and abroad, and it has been found that most patients can benefit from non-surgical treatment. Therefore, conservative treatment is recommended as the first-line treatment of LDH [4]. In long-term clinical practice, it has been found that traditional Chinese medicine has good clinical effect and safety for LDH[5]. The application of Huangqi Guizhi Wuwu decoction has also made some progress. This paper reviews the research progress of Huangqi Guizhi Wuwu decoction in the treatment of LDH.

1. Analysis of the Meaning

The earliest record of Huangqi Guizhi Wuwu soup can be found in Zhang Zhongjing's "Golden Chamber Synopsis · Blood Bi deficiency and fatigue disease and treatment of the pulse", "blood Bi, Yin and Yang are micro, inch mouth closed micro, small and tight ruler, external syndrome body is not good, just like wind bi, with Huangqi Guizhi Wuwu soup indications". The effect of astragalus is rising Yang Yiqi, so it is your medicine; With the effect of cassia branch sweating table, cold and pain relief, Tongyang Hua Qi can warm meridians to achieve the purpose of Tongbi pain relief, complementary with the role of the Junyao astragalus, the combination of the two can Yiqi make Weiyang excited, solid surface and do not make the external evil stay in the body, can achieve the effect of Yiyang temperature. Peony can nourish Yin, soften liver and relieve pain, with cinnamomum can adjust Yingwei and surface, and astragalus is acid Gan Yin, so that Qi and blood double tonic. Ginger Xinwen, dispersing wind evil, can help the effect of cinnamon branch; Jujube good at nourishing blood and qi, which can assist astragalus, peony and other medicinal powers; Compatible with ginger, to adjust the camp, and various medicines.

2. Clinical Application Research

2.1. Unilateral Application

The main clinical complaint of LDH patients is numbness and pain in the back and legs. In terms of clinical treatment, Western medicine mainly treats LDH with drugs and surgery (see Figure 1), while Chinese medicine broadly classifies LDH into "qi-blood stagnation type," "damp-heat-phlegm stagnation type," "wind-cold-damp paralysis type," and "liver-kidney deficiency type," and provides corresponding prescriptions (see Figure 2).

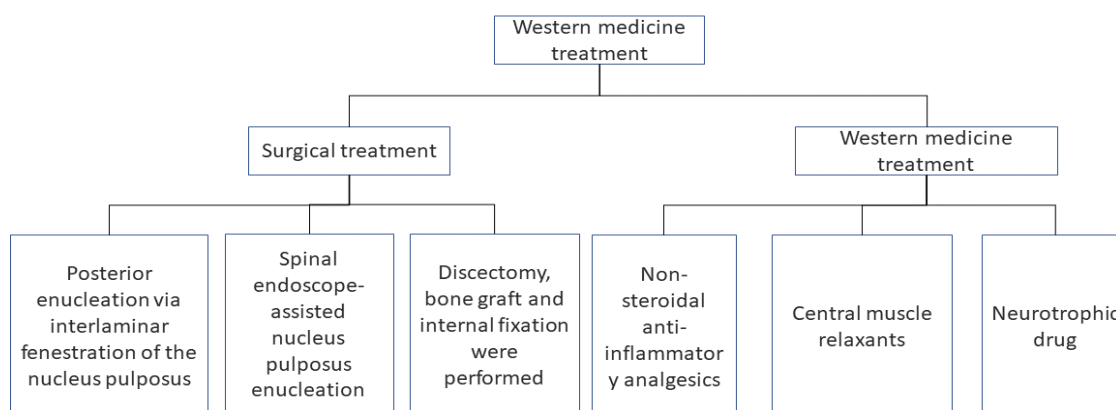


Figure 1. Common methods and drugs used in Western medicine to treat LDH

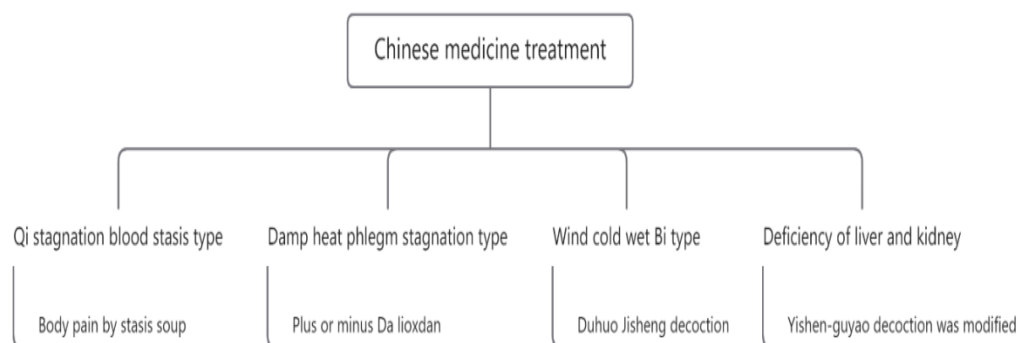


Figure 2. Commonly used subtypes and prescriptions for LDH in Chinese medicine

"Zhang Yitong · Numbness" contains: "Numb is phlegm deficiency; Wood belongs to damp phlegm and dead blood. One piece of wood does not know the pain and itching. If it is wooden, it is also "; "Medical introduction · Bi wind" said: "wood, for blood obstruction qi; between wood, it is wet phlegm also ", according to the provisions of these two ancient books, numbness is caused by the mutual junction of phlegm and blood stasis caused by Qi and blood meridian block. Professor Chen Zhiwei [6] It is also believed that Qi deficiency, blood deficiency, phlegm and blood stasis block or dampness and dampness are the main causes of LDH. "Suwen · Reverse Tone Theory" contains: "Rong Qi deficiency is not benevolence", "Suwen · Blood Gas Form" says: "Impassability of meridians and collaterals, the disease is mostly born in the non benevolence also", "Jing Yue Complete book · Non wind Syndrome treatment Method" records: "Non-wind, numbness and other symptoms, all because their qi and blood are not to, so they do not know pain and itching, cover Qi deficiency of numbness, blood deficiency of wood." The above can prove that pain numbness is related to qi and blood disorders, evil stagnation veins. And Astragalus Guizhi Wuwu decoction can promote Yang and qi, and Ying Xuan Bi; Inside help healthy qi, outside dispersing evil qi; Can warm Yang can also nourish Yin, Yin and Yang. Therefore, Professor Chen concluded that this prescription is suitable for patients with qi deficiency and blood stagnation, and disharmony between camp and guard. Moreover, Professor Chen's addition and subtraction of the original prescription in clinical application has achieved good curative effect, especially for patients with Qi deficiency and blood stasis. Prof. Zhijun Liu [7] Think excruciating pain and numbness caused by LDH as a "blood resistance, gas is not up to form", li dongheng mentioned in "the blue room door cache woman" : "numbness, such as rope bondage, feel numbness of interpretation attack and did not dare to move, for a long time can vanish, to push it, not with the wind, is not also. "Professor liu extrapolating the "gas" as the root cause, combining GuShangBing "more blood", think that "blood" is the most important factors to cause "gas", therefore, clinical treatment by promoting blood circulation to remove blood stasis, will benefit gas-solid table, harmonic camp guard throughout, this exciting sun be the spirit of encouraging qi and blood, and is beneficial to dispel pathogenic factors, achieve the goal of diarrhea in repair. The clinical application of Astragalus Guizhi Wuwu decoction has remarkable therapeutic effect. FuBiFeng [8] A total of 62 patients with LDH diagnosis were selected. On the basis of mannitol combined with dexamethasone treatment, mecobalamin was given to half of the patients, and Huangqi Guizhi Wuwu Decoction was given to the other half. Wang li[9] In the treatment of numbness and pain caused by lumbar disc herniation, in addition to the basic treatment, Huangqi Guizhi Wuwu decoction was added to the treatment. From the follow-up results recorded later, the total effective rate was 93%, indicating that Huangqi Guizhi Wuwu decoction had a good effect on LDH. At the same time, Huangqi Guizhi Wuwu decoction can also be used for the numbness symptoms after LDH. The bear deng[10]. A total of 60 LDH patients

were randomly divided into a control group (n = 30) and an experimental group (n = 30) who underwent lumbar disc decompression surgery. The control group was treated with mecobalamin tablets, and the experimental group was treated with Huangqi Guizhi Wuwu decoction. The results showed that the effect of Huangqi Guizhi Wuwu decoction was significant in the early stage of treatment, and there was no significant difference between the two groups in the later stage, indicating that Huangqi Guizhi Wuwu decoction could effectively reduce the numbness symptoms of patients in the early stage after surgery. And the chardonnay [11] A total of 108 LDH patients (54 cases in each group) were divided into control groups and observed after posterior nucleus pulposus removal and lateral recess enlargement. The control group was treated with oral Mikebao tablets, while the treatment group was treated with Huangqi Guizhi Wuwu decoction.

2.2. Combined Use of Multiple Parties

In clinical treatment, other prescriptions can be added according to the overall changes of the patient's condition to achieve a comprehensive and systematic treatment effect. Liu Zuyi, master of traditional Chinese medicine [12]. In the summary of his many years of clinical treatment, experience, we found that lumbar disc herniation and long-term fatigue related trauma caused by congestion block meridians is also one of the reasons for the disease prone to recurrent attacks. "Jingyue Encyclopedia · lumbago" said: "Falling servant injury caused lumbago, this injury in the bones and blood stagnation also". On the basis of many years of clinical experience, Professor Liu Zuyi regarded the occurrence of LDH as the result of the combined action of positive deficiency, exogenous evil and pathological products in combination with the provisions of ancient books. The essence for this virtual to real, namely, qi and blood deficiency, liver and kidney deficiency, the origin and when blood clot and chill, so treatment should be used is to cause tonic qi and blood, liver and kidney, invigorate the circulation of t2dm with drug prescriptions, after many years of clinical practice, professor liu found living by huangqi guizhi wuwu soup and parasitic tonga subtraction share in the treatment of LDH has good curative effect. Li Yanmin, a national famous old Chinese medicine teacher [13]. The main complaints of LDH patients were tetraplegic symptoms, and Huangqi Guizhi Wuwu decoction was the special prescription for treating blood arthralgia according to the Synopsis of the Golden Chamber. It was designed to benefit qi and connect Yang, adjustable Ying wei, and stop arthralgia pain, which was in line with the pathogenesis of qi and blood deficiency and could not nourish the veins. Through the analysis of the prescriptions of Huangqi Guizhi Wuwu decoction and Danggui blood-nourishing decoction in the treatment of LDH for decades, Teacher Li summarized the special prescription "Huanglong white cow decoction" (Huangqi Guizhi Wuwu decoction combined with Danggui blood-nourishing decoction) for LDH, especially for LDH patients with liver and kidney insufficiency and both qi and blood deficiency. After clinical application, the symptoms of LDH patients were alleviated clearly, and the effect was remarkable. Some people add manipulation and western medicine on the basis of multi-party combined treatment, and the effect is remarkable. Gu Xiaoxiang [14]. A total of 28 patients who met the diagnostic criteria of lumbar disc herniation were selected. All patients were treated with quadruple therapy without grouping, i.e., 1. Pelvic traction (0.5-1H/ time, twice/day, 15 days as a course of treatment); 2. Sacral injection (once a week, 3 times per course); 3. Trismus manipulation of Du vein nerve (once every 7 days, 3 times /1 course); 4. Wuwu Wuling decoction (Huangqi Guizhi Wuwu decoction and Wuling decoction) plus or minus internal administration, dose every day in the morning and evening, take 5, stop 2,15 paste for a course of treatment. After 21 days of treatment, the total effective rate was 82.1%, indicating that the combination of multiple methods, drug injection and traction were effective in the treatment of LDH.

2.3. Internal and External Combination

External treatment is also one of the characteristics of TCM. For example, the characteristic TCM manipulative massage treatment (see Figure 3).

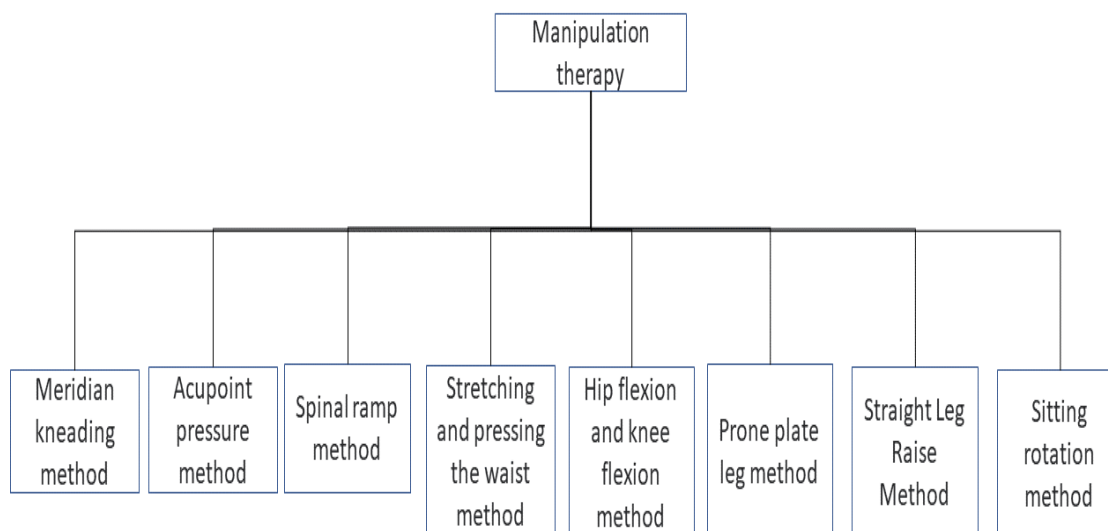


Figure 3. Manipulative treatment of LDH

In clinical practice, it has been found that traditional Chinese medicine prescriptions combined with acupuncture, acupotomy, and manual reduction also have good therapeutic effects on LDH. flock[15]Included 107 patients with LDH in postoperative residual neurologic damage as an experimental objects, and based on the principles of random experiment was divided into control group and observation group, control group by double lower limbs electroacupuncture foot three mile, hong leong, observation group was treated with huangqi guizhi wuwu tang, the results showed that the curative combined huangqi guizhi wuwu decoction can promote the restoration of nerve function, The results showed that EA combined with Huangqi Guizhi Wuwu decoction could promote the repair of nerve function, improve the level of related nerve factors, effectively relieve the postoperative symptoms of LDH patients, and the clinical effect was significant.li[16]100 LDH patients were randomly divided into two groups. The control group was treated with traditional Chinese medicine acupuncture alone, while the experimental group was treated with Huangqi Guizhi Wuwu decoction on the basis of acupuncture treatment. The results showed that the experimental group was more effective than the control group. The results showed that the experimental group was significantly more effective than the control group, indicating that the combination of internal and external therapy in the treatment of LDH (blood stasis type) was better than monotherapy. MoJun [17] Through consulting a large amount of data, found the clinical application of plug to zebulun capsule share of Chinese medicine and acupuncture effect is higher than the single use of western medicine, at the same time, also found that Huangqi guizhi wuwu decoction combined with acupuncture treatment can alleviate the local blood circulation to promote hematoma absorption, improve nerve root compression area ischemia oxygen deficit, promote restoration of the nerve function to achieve treatment, And the method is simple and patients are willing to accept it. Shang YanJie [18]According to the theory of ancient books and classics "Golden Chamber Essentials · Treatment of blood Bi deficiency and fatigue disease pulse syndrome" "husband honor people.....But with the pulse from slightly astringent, in Cunkou, close

small tight, it is appropriate to make the needle Yang Qi, make the pulse and tight away, then self-healing. Blood Bi, Yin and Yang are micro.....Outside the body, just as the wind bi, is after the huangqi guizhi wuwu tang ", on the basis of full understanding of traditional Chinese medicine acupuncture treatment and prescription combined huangqi guizhi wuwu tang, through many years of clinical practice and long-term observation regardless of weight, poliomyelitis needle medicine share the curative effect is best, in clinical repeatedly test and inspection. Liang town of macro[19]Sixty-eight patients with LDH were selected and treated with traditional Chinese medicine combined with manipulation. The results showed that the total effective rate was more than 91.2%, indicating that Huangqi Guizhi Wuwu decoction combined with manipulation could relieve the symptoms of most patients and effectively relieve or eliminate the nerve root compression. For a series of symptoms and signs caused by LDH surgery, important prescriptions combined with traditional Chinese medicine massage also have a good effect, He Xiaofei[20]A total of 21 patients with a series of symptoms and signs caused by LDH operation failure were studied. Based on the external treatment of lumbar short lever fixed point and oblique manipulation, and the Chinese medicine prescription Huangqi Guizhi Wuwu decoction was taken internally, a series of symptoms and signs of the patients were significantly improved after treatment, and the scores of the patients also had better changes. The results showed that this combination of internal and external massage combined with traditional Chinese medicine prescription was effective, easy to be accepted by patients, suitable for clinical use, and worthy of promotion.

2.4. Combination of Chinese and Western Medicine

Modern medical technology and drugs also have their own advantages in the treatment of LDH, which can be combined with traditional Chinese medicine to achieve good efficacy. Guang-hui liu[21] Select 74 cases of LDH patients randomly divided into two groups, with percutaneous intervertebral foramen microscopically treatment, on the basis of the extraction of nucleus pulposus in the treatment of treatment based on the conventional drugs as control group, treated with huangqi guizhi wuwu tang Chinese internal and observation group of treatment, after treatment pays a return visit, said the two treatments have curative effect, However, the combination of traditional Chinese medicine prescription and modern western medicine treatment technology can achieve better clinical efficacy, and can reduce inflammatory reaction. Xie Hailiang[22] Selected the 84 accord with standard of diagnosis of LDH, patients were randomly divided into two groups, control group, therapy for percutaneous discectomy, intervertebral foramen mirror observation group on the basis of the above plan taking orally Chinese traditional medicine prescription Huangqi Guizhi wuwu tang, this kind of treatment of traditional Chinese medicine and western medicine combined treatment of surgical technique achieved good clinical effect, at the same time also can rapid pain relief to promote postoperative rehabilitation, Thus, the lumbar function was improved. MaoYiPeng [23]Such as average of 64 patients with LDH were randomly divided into two groups, percutaneous intervertebral foramen microscopically nucleus pulposus to the control group used the extraction treatment, the treatment group in the above scheme based on internal and huangqi guizhi wuwu tang prescriptions, the results show that huangqi guizhi wuwu tang orally combined with percutaneous intervertebral foramen the microscopic effect of the extraction of nucleus pulposus was clearly higher than that of pure surgery therapy, Moreover, Huangqi Guizhi Wuwu decoction combined with percutaneous foraminal endoscopic nucleus pulposus extraction had better neurological function recovery. Zhang man [24]80 LDH patients were randomly divided into two groups. The control group was treated with sacral block only, while the treatment group was treated with Huangqi Guizhi Wuwu decoction combined with sacral block. The results showed that the total effective rate of the treatment group was 92.5%, while the control group was 80.0%(see Figure 4).

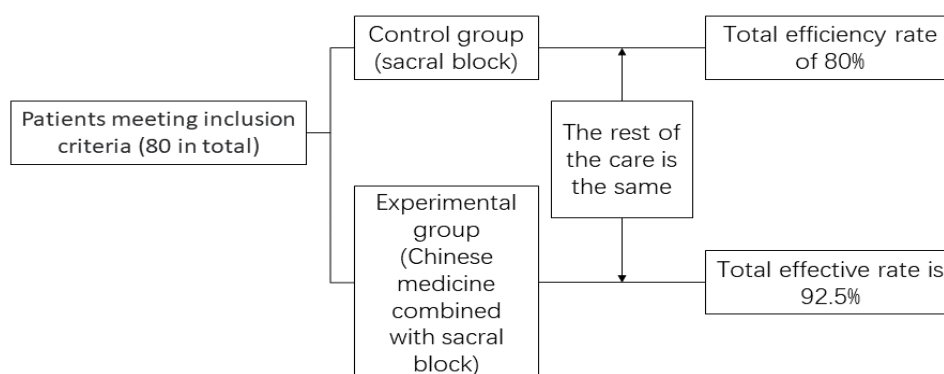


Figure 4. Comparison of clinical efficacy

The results indicated that the conservative treatment effect of Huangqi Guizhi Wuwu decoction combined with sacral block was better than that of sacral block alone, and the cost was less, and the patients were easy to accept. Wean [25] Such as average 70 LDH patients were randomly divided into two groups, on the basis of the intervertebral foramen surgery to the control group treated only with drugs, while the experimental group on the basis of the above treatment internal and Huangqi Guizhi Wuwu decoction prescriptions, shows that the experimental group after treatment to observe the curative effect is better, in promoting the quality of daily life. Jing-bo Yang[26] Will be equivalent to 80 cases of LDH patients into two groups at random, sacral canal blocking for the control group, treatment of this plan on the basis of internal and Huangqi guizhi Wuwu decoction for the treatment group, the results show that Huangqi guizhi wuwu decoction on the clinical curative effect of combination of sacral canal blocking and significantly better than pure application of sacral canal blocking and spend less time, suffered less pain, Huangqi Guizhi Wuwu decoction is easier to be accepted by patients. Sun Xuan[27] Adopts five three wuwu decoction (huangqi guizhi wuwu decoction and five three dispersions) combined with endoscopic technology to treat patients with LDH 43 patients, all patients were under endoscopic surgery to take out five three prominent and nucleus pulposus wuwu decoction, the results showed that traditional Chinese medicine (TCM) combined with endoscopic technique curative effect is distinct, and traditional Chinese medicine can effectively alleviate and treatment of postoperative residual symptoms, worth clinical promotion. Dong Zhenyu[28] A total of 70 patients with lumbar process were randomly divided into two groups and underwent endoscopic surgery. The treatment group was treated with Huangqi Guizhi Wuwu decoction combined with sodium hyaluronate. The results showed that the symptoms of the two groups were alleviated, and the therapeutic effect of the treatment group was better than the control group. The clinical application of Huangqi Guizhi Wuwu decoction combined with sodium hyaluronate has a significant effect and is better than simple surgery. It can effectively improve numbness and other symptoms after MED, with less adverse reactions, simple and safe, but the mechanism of action needs to be improved. KeMing[29] Ninety-three LDH patients were treated with Huangqi Guizhi Wuwu decoction combined with percutaneous transforaminal endoscopic nucleus pulposus extraction. The patients in the control group were treated with percutaneous transforaminal endoscopic nucleus pulposus extraction, and the patients in the experimental group were treated with Huangqi Guizhi Wuwu decoction on the basis of the operation plan. The results showed that the treatment of LDH patients with traditional Chinese medicine combined with western medicine can achieve significant effect, and can improve lumbar function. Yellow different fly[30] Such as the selection of 126 patients with LDH conducted clinical research, to each patient lamina windowing removal of nucleus pulposus and or lateral crypt expand, and huangqi guizhi wuwu decoction oral treatment, the final results indicate that the total

effective rate was 96.8%, that with huangqi guizhi wuwu decoction combined with western medicine have certain curative effect surgical technique in the treatment of LDH, Moreover, Huangqi Guizhi Wuwu decoction can improve postoperative numbness symptoms, reduce nerve root edema, improve ischemia and hypoxia state, and has high safety.

3. Summary

Lumbar disc herniation is a common disease in orthopedics that is easy to repeat frequently. In severe cases, it will affect daily life and work. The comprehensive related clinical application on the basis of literature research, it can be seen that Huangqi Guizhi Wuwu Tang has a good therapeutic effect on LDH, not only his own relief for the symptoms of LDH, causing a series of symptoms and signs for LDH postoperative symptoms such as numbness, feels obstacle also has good curative effect, in addition to the unilateral application, It can also be used in combination with the prescription or combined with other therapies such as acupuncture, massage, surgery, etc(see Figure 5).

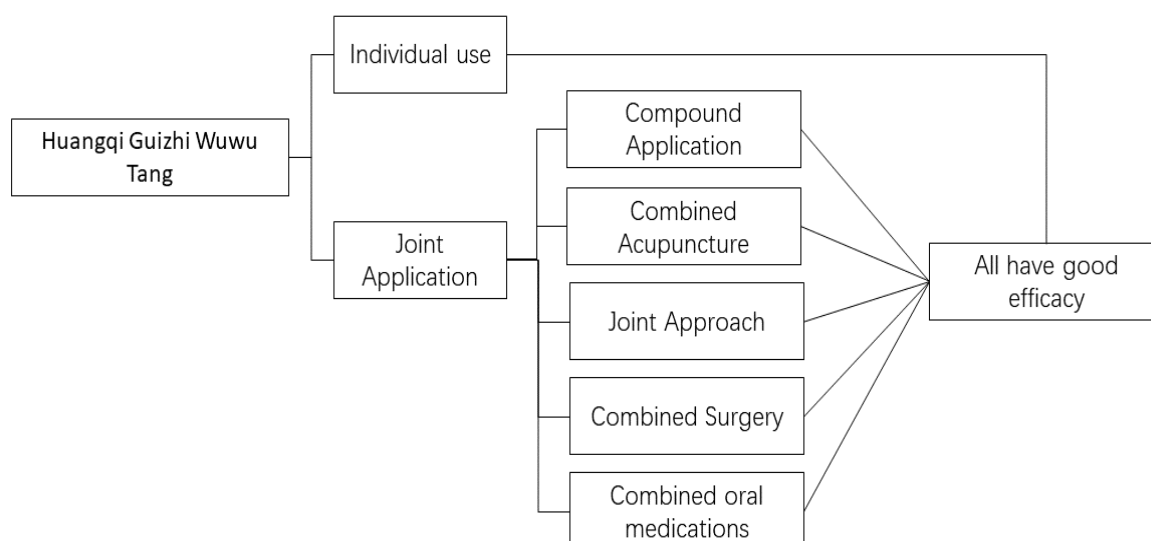


Figure 5. Therapeutic effect of Huangqi Guizhi Wuwu Tang

With the same significant effect. In the documented literature, Huangqi Guizhi Wuwu decoction can also be used to treat peripheral neuritis, peripheral neuritis, cervical intervertebral disc disease, rheumatoid arthritis, thromboangiitis obliterans, IgA nephropathy, lupus nephritis and other modern medical diseases[31-38]. Modern pharmacological studies have also confirmed that Huangqi Guizhi Wuwu decoction has immunomodulatory effects, affects hemorheology, fights oxidative damage, promotes nerve repair, and inhibits inflammation and oxidative stress[39-43]. But at this stage the huangqi guizhi wuwu decoction in the treatment of LDH literature only clinical applications, its mechanism of action remains to be perfect, the more the lack of related experimental study provides reference for clinical, in the subsequent study should take the effect of huangqi guizhi wuwu tang has, on the basis of the combination of lumbar intervertebral disc protrusion conduct the thorough research to the etiology, pathogenesis and principle, We should deepen the research on the pharmacological mechanism and action principle of Huangqi Guizhi Wuwu decoction in the treatment of LDH, enrich the modern scientific theory of Huangqi Guizhi Wuwu decoction in the treatment of LDH, and provide more powerful theoretical support on the basis of clinical application.

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Data Availability

No new data is used or generated.

Conflict of Interest

No conflict of interest.

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