

Observation on Efficacy of Gentongping Tablets in Treatment of Nerve-Root Type Cervical Spondylosis

The First Affiliated Hospital of He'nan University of Science and Technology
(Luoyang 471003)

LANG Ran WANG Xiaoping YANG Meng

Keywords Nerve-Root Type Cervical Spondylosis/Traditional Chinese Medicine Therapy
Gentongping Tablets/Clinical Study on Treatment Application

Gentongping Tablet is a new Class II type of Chinese medicine for the treatment of nerve-root type cervical spondylosis, which can relieve pain, regulate qi, activate blood circulation, relax muscles and activate collaterals. To further observe the efficacy of Gentongping Tablets in the treatment of nerve-root type cervical spondylosis, from June 2002 to December 2004, Gentongping Tablets were adopted for 40 patients in the treatment of nerve-root type cervical spondylosis, and the efficacy was satisfactory in comparison with that in the 40 patients treated with Jingfukang Granules in the same period. Now it is summarized and reported as follows.

1. Clinical Information

All the 80 patients with nerve-root type cervical spondylosis had the symptoms of dizziness, stiff neck and pain, numbness and pain in the upper limbs, inconvenient and unfavorable body rotation, aggravation of symptoms after fatigue. X-ray and CT showed that 80 cases had different degrees of bone hyperplasia, lateral recess stenosis and change in the physiological curvature. Neck muscles of patients had varying degrees of tension, peeling, and pressing pain. Both results of the cervical intervertebral foramen compression test and traction test of brachial plexus were positive. The patients' conditions conformed to the diagnostic criteria of *Guidelines for Clinical Research on Treatment of Cervical Spondylosis with New Chinese Medicine*. The 80 patients were randomly divided into two groups. There were 40 patients in the Treatment Group (Gentongping group), with 21 males and 19 females at the ages of 30~64; the shortest course of disease was 7 days, and the longest was 18 years. There were 40 patients in the Control Group (Jingfukang group), with 28 males and 12 females at the ages of 32~63; the shortest course of disease was 5 days, and the longest was 17 years. Through comparison and statistical processing, there was no difference ($P>0.05$) in gender, age and course of disease between the two groups and they were comparable.

2. Methods

2.1 Treatment Methods The patients in the Treatment Group orally took Gentongping Tablets (manufactured by Chengde YanFeng Pharmaceutical Co., Ltd., with the batch number of 020108 and the specification of 0.5 g per tablet) 3 times a day, 1.5 g/time. The patients in the Control Group orally took Jingfukang Granules (manufactured by Chengde Jingfukang Pharmaceutical Group Co., Ltd., with the batch number of 213022204 and the specification of 5 g per bag) twice a day, 10 g/time. All the patients were treated for 4 weeks.

2.2 Observation Methods Before and after the treatment, pain in the neck and shoulders of

the two groups, numbness and pain of the upper limbs. Pain and neck movement of the patients in the two groups were observed and compared, to understand the efficacy of Gentongping Tablets.

3. Results

3.1 Pain Grading Criteria^[1] The Visual Analogue Pain Rating Scales (VAPS) were adopted for assessment. Level 0: no pain and normal; Level 1: Intermittent or occasional mild pain; Level 2: Persistent mild pain with no influence on work; Level 3: Persistent moderate pain partially affect work; Level 4: Unbearable and severe pain, due to which the daily activities are partially affected. Levels 0~4 correspond to 0~4 points.

3.2 Efficacy Evaluation Criteria The neck pain drops to level 0, and all the related symptoms and signs disappear, without affecting activities and work; it has marked effect: The neck pain drops to level 2, and the related symptoms and signs basically disappear, only after fatigue or mild symptoms when the weather changes, functional recovery, does not affect daily life and work; it is effective: The neck pain drops to level 3, its related symptoms and signs have improved, but the condition is unstable, there is a relapse after stopping treatment, there is heavy labor, it is invalid: The neck pain drops to level 4, no change in grade before treatment, and related symptoms and signs did not improve nor worsen.

3.3 Efficacy Evaluation Results The longest treatment time of the two groups was 56 days, the shortest was 20 days, with an average of 28 days. After 4 weeks of treatment, the efficacy was assessed according to the above criteria. In the results, the effective rate of the Treatment Group was 95%, and that of the Control Group was 67.5%. Through comparison, there was a significant difference in the effective rates between the two groups ($P<0.01$), and the efficacy of the Treatment Group was better than that of the Control Group. As shown in Table 2, there was no significant difference in the VAPS scores of the two groups before treatment ($P>0.05$), indicating that the case grouping was balanced, and the scores were comparable; however, there was a significant difference in the scores of the two groups ($P<0.01$), indicating that the pain improvement effect of the Treatment Group was significantly better than that of the Control Group.

Table 1 Comparison of the Efficacy of the Two Groups (Case) (%)

Group	Number of Cases	Cured	Markedly Effective	Effective	Ineffective	Efficiency Rate
Treatment Group	40	8(20.0)	17(42.5)	13(32.5)	2(5.0)	95.0
Control Group	40	2(5.0)	15(37.5)	10(25.0)	13(32.5)	67.5

Table 2 Comparison of VAPS Scores of the Two Groups before and after Treatment (Point)

Group	Number of Cases	Before Treatment	After Treatment
Treatment Group	40	8.8±0.65	5.3±1.31
Control Group	40	8.3±0.73	7.2±1.21

4. Discussion

According to the traditional Chinese medicine, the cause of early cervical spondylosis is that wind-cold damp pathogen is long retained and injected into the meridians, blood vessels and joints, resulting in the pathological changes of "disturbance in qi and blood and deficiency of yang-qi", and the clinical manifestations mainly include qi stagnation and blood stasis. The pathogenesis of cervical spondylosis is qi deficiency and blood stasis and asthenia in origin and excessive pathogen in superficiality ^[2]. Gentongping Tablets contain white peony root, peach kernel and safflower, which can promote blood circulation to remove blood stasis, increase the number and area of vascular buds, promote vascular repair and regeneration, and further enhance the nutritional supply of cervical intervertebral discs ^[2]. Especially, safflower has significant antithrombotic and anti-platelet aggregation effects, through which the blood flow can be accelerated, microvascular spasm and stasis and aggregation of red blood cells in the microcirculation can be relieved, so that the blood stasis in the microvascular loop top can be decreased or eliminated ^[3]. It is the pharmacological basis of Gentongping Tablets in treating cervical spondylosis and achieving obvious results.

Saal et al. ^[4] found in the research that in the patients with cervical intervertebral disc herniation and obvious nerve root pain, the activity of phospholipase A₂ in cervical intervertebral disc tissues was higher than that in other tissues. Pueraria lobata in Gentongping Tablets can lower the activity level of phospholipase A₂ ^[2], so the efficacy of the drug in the treatment of nerve-root type cervical spondylosis is significant. Olibanum, myrrh and lycopodium clavatum in Gentongping Tablets can regulate qi, promote blood circulation, relax muscles, activate collaterals and relieve pain; achyranthes bidentata can relieve inflammation and pain, and the mechanism of the anti-inflammatory effect is to improve the microcirculation through enhancement of the immune function of the body and to promote absorption of inflammatory lesion^[5]; liquorice has the adrenal cortical hormone like functions, with anti-inflammatory, anti-allergic reaction, detoxification, spasmolytic and analgesic effects^[5], and can harmonize various medicines, through which Gentongping Tablets are added with the effects of blood circulation promoting, meridian activating and pain relieving. As shown in the clinical observation, Gentongping Tablets are a good drug for treatment of nerve-root type cervical spondylosis.

5. References

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(Receiving Date: January 23, 2006 Revision Date: May 7, 2006)