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Clinical Controlled Study of Ultrasound-guided Acupuncture Treatment of Waist "Ashi Point"

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Abstract: ***Objective:*** *To study the clinical effect of ultrasound-guided acupuncture in the treatment of "Ashi point".* ***Methods:*** *From January 2023 to December 2024,60 patients with chronic pain who were treated in the outpatient and inpatient departments of the second spine ward of Xi'an Hospital of Traditional Chinese Medicine were randomly assigned to the treatment group and the control group, 30 cases in each group. The control group was treated with traditional acupuncture, and the treatment group was treated with ultrasound-guided acupuncture.* ***Results:*** *After treatment, the VAS score of the treatment group was lower than that of the control group, and the difference was statistically significant (P < 0.05). After treatment, the Oswestry disability index in the treatment group was lower than that in the control group (P < 0.05).* ***Conclusion:*** *Ultrasound-guided acupuncture treatment of 'Ashi point' has a significant effect, which can effectively relieve the pain of patients, and the clinical effect and long-term effect are definite.*

Keywords: The ashi point, Ultrasound-guided, Acupuncture and moxibustion, Traditional Chinese medicine therapy.

1. Introduction

Ashi point is a special case in acupoints. According to the interpretation of the fifth edition of "acupuncture and moxibustion," it can be understood as a kind of acupoints with no specific name and no specific location, but with tenderness point or reaction point as the specific acupuncture position [1]. Due to the aseptic inflammatory reaction formed under the action of acute injury or chronic strain [2], based on the above reasons, the waist and hip Ashi points are the most common. At present, the treatment of waist and hip Ashi points is diverse. Western medicine is mainly based on oral anti-inflammatory and analgesic drugs. This method has a great impact on the body, and cannot be taken for a long time and has poor efficacy [3]. Traditional Chinese medicine treatment has acupuncture, traditional Chinese medicine, massage, needle knife, etc. The individual treatment effect is more limited. The clinical needs a new treatment plan with long-term efficacy and economic and time benefits. The combination of traditional Chinese and Western medicine treatment methods has become a new choice.

Myofascial Trigger Points (MTP), also known as trigger point, is the main cause of chronic myofascitis [4]. It was first proposed by American clinical professor Janet Travell in 1942, which can be divided into potential MTP and activated MTP. In general, there are some potential MTrPs on skeletal muscle that can be caused by chronic injury. These MTrPs are in a hidden state for a long time and do not cause spontaneous pain or only mild local pain. However, they can be activated by certain pathogenic factors into activated MTrPs, such as sports trauma, muscle fatigue, decreased resistance, etc. [5]. Some studies have pointed out that 255 known trigger points coincide with 92% of traditional acupuncture points in anatomy, and 79.5% of them coincide with the effect of pain treatment [6]. The activation of the invisible trigger point can be an incentive for the activation of another trigger point in the same muscle group. When distant pain is induced, a relatively fixed sensing line can be formed [7], which is similar to the meridian theory connotation of Ashi point. The study found that 76% of this sensing line is completely consistent [8]. Therefore, in the treatment of myofascial pain, it can be considered that the Ashi point is both the trigger point and the Ashi point provides a general direction for the blade needle treatment of the precise trigger point. In clinical practice, the author found that Xi'an Hospital of Traditional Chinese Medicine used ultrasound-guided acupuncture to treat Ashi points with significant curative effect, which is reported as follows.

2. Information and Methodology

2.1 General Information

From January 2023 to December 2024,60 patients with chronic pain were randomly divided into treatment group and control group, 30 cases in each group. Control group: 16 male patients and 14 female patients; the average age was (52.3 ± 8.7) years. The average course of disease was (14.5 ± 6.3) months. Treatment group: 18 male patients, 12 female patients; the average age was (54.1 ± 9.2) years old. The average course of disease was (16.2 ± 7.1) months. There was no significant difference in the general data between the two groups (P > 0.05), which was comparable.

2.2 Diagnostic Criteria

According to the diagnostic criteria of lumbar muscle strain in the 'People's Republic of China Traditional Chinese Medicine Industry Standard-Traditional Chinese Medicine Disease Diagnosis and Efficacy Standard' (ZY/T001.1-94) [9], the self-made criteria are as follows:

(1) The patient had a long history of low back pain, and the clinical manifestations were more than three months.

(2) Patients with one side or both sides of the waist and hip skeletal muscle pain, acid, sleepy, swelling or numbness and other symptoms, often because of long standing, long lying, sedentary back and leg pain symptoms increased, the waist after appropriate activity symptoms eased; aggravated after excessive fatigue, reduced after appropriate rest; or cold, wet

and rainy weather is aggravated, dry and warm climate is reduced;

(3) Muscles on one or both sides of the lumbar spine are tense, and there are relatively fixed tenderness points in the waist and buttocks, or local pain trigger points or band-like tenderness points can be touched;

(4) Lumbar gluteal muscle stiffness, stagnation or spasm, with cords or (and) nodules, long-term illness can have lumbar gluteal muscle atrophy.

2.3 Inclusion Criteria.

(1) Those who meet the above diagnostic criteria;

(2) Signed informed consent, volunteered to participate in this study;

(3) 18-65 years old;

(4) Good compliance with the treatment and evaluation of the researchers;

(5) No drugs and other treatments related to the disease were performed in the past 2 weeks.

2.4 Exclusion Criteria

(1) Those who do not meet the inclusion criteria;

(2) Patients with spinal fracture, tumor, infection, spondylolisthesis, cauda equina syndrome, osteoporosis, scoliosis and kyphosis more than 10°;

(3) Complicated with severe primary diseases such as severe cardiovascular system, hematopoietic system, endocrine system, urinary system and psychiatric history;

(4) Patients with cardiac pacemaker and metal foreign bodies around the waist and back;

(5) Pregnant and lactating women;

(6) Patients with a history of fainting, fainting blood or other special constitutions such as allergies;

If one of the above is met, it will not be included.

2.5 Method

The treatment group was treated with ultrasound-guided acupuncture group, and the patients in the treatment group were given ultrasonic positioning and exploration of Ashi points. The control group was the ordinary traditional acupoint selection acupuncture group. The treatment group: ultrasound-guided acupuncture treatment, once every 5 days, a total of 2 treatments. The control group: ordinary acupuncture treatment, 2 days of treatment, a total of 5 times of treatment;

2.6 Observation Indicators

The super VAS score and Oswestry score of low back pain were recorded before treatment, after treatment and 3 months after treatment.

2.7 Statistical Methods

SPSS 26.0 software was used for data analysis, and the measurement data were expressed as mean ± standard deviation ($x \pm s$). Repeated measures analysis of variance (ANOVA) was used for intra-group comparison, and independent sample t test was used for inter-group comparison. The difference was statistically significant ($P < 0.05$).

3. Results

3.1 VAS Score Comparison (Table 1)

Table 1: VAS score comparison

peer group	number of samples	before treatment	posttreatment	3 months after treatment
experimental group	30	7.5±1.2	2.1±0.8	2.3±1.0
control group	30	7.3±1.1	3.9±1.2	4.8±1.5

Note: Compared with the same group before treatment, ($P < 0.01$). Compared with the control group after treatment, ($P < 0.05$).

Conclusion: The VAS scores of the two groups decreased significantly after treatment ($P < 0.01$), but the scores of the experimental group were lower than those of the control group after treatment and three months after treatment ($P < 0.05$). The risk of long-term pain recurrence in the experimental group was lower.

3.2 Oswestry Disability Index (ODI) Comparison (Table 2)

Table 2: Oswestry Disability Index (ODI) comparison

peer group	number of samples	before treatment	posttreatment	3months after treatment
experimental group	30	68.4±9.2	24.3±6.5	26.1±7.8
control group	30	67.8±8.7	38.6±8.1	45.2±10

Note: intra-group comparison ($P < 0.01$), inter-group comparison ($P < 0.05$).

Conclusion: The improvement of ODI in the experimental group was significantly better than that in the control group, especially in the dimensions of 'standing tolerance time 'and' daily walking ability' ($P < 0.01$). The ODI of the control group rose to 45.2% at T2, suggesting that the long-term function maintenance effect of traditional acupuncture was limited.

4. Discussions

Ultrasound-guided precise treatment of 'Ashi point' can make traditional acupuncture therapy more precise and visualize the whole process of treatment. Data-based ultrasound-guided Ashi point acupuncture can significantly relieve low back pain and improve function. Its visualization and precision characteristics provide a reliable path for the modernization of traditional Chinese medicine. In the future, it is necessary to expand the sample size and explore the molecular mechanism to further optimize the treatment plan.

Fund Project

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