

Clinical Research on Treatment of Migraine with Combination of Characteristic and Superior Techniques of Zhuang Medicine

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Abstract: *Objective:* To study the application effect of the combination of special advantages of Zhuang medical technology for migraine patients. *Methods:* 80 patients with migraine were selected and all were admitted to Mingxiu Branch of International Zhuang Hospital Affiliated to Guangxi University of Traditional Chinese Medicine from February 2019 to February 2020. Random number table method was used to divide patients into two groups, with 40 patients in each group. Among them, the patients in the study group were treated with the therapy combining characteristics of Zhuang medicine and superior technology, that is, Zhuang medicine meridian tendon therapy + Zhuang medicine lotus needle cupping blood stasis removal therapy + Zhuang medicine thread moxibustion therapy + Zhuang medicine acupuncture therapy; the patients in the control group were treated with conventional Western medicine. The efficacy of the two treatments were compared. *Results:* After treatment, the total effective rate of clinical treatment in the study group was higher than that in the control group ($P < 0.05$), and the visual analogue scale (VAS) score and integral improvement rate were higher than those in the control group ($P < 0.05$). The onset time of action was statistically shorter than that of the control group ($P < 0.05$). There was a statistically significant difference in the adverse reaction rate between the two groups ($P < 0.05$). *Conclusion:* The combination of Zhuang medicine's characteristic and superior techniques for patients with migraine has a significant curative effect.

Keywords: Migraine; Meridian therapy; Lotus needle cupping and blood stasis therapy; Thread moxibustion therapy; Acupuncture; Clinical efficacy

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1. Introduction

Migraine is a relatively common chronic neurovascular disorder. At present, there is no unified conclusion on the etiological mechanism of this disease, but most of them believe that the changes in diastolic and systolic function of cerebral blood supply arteries and abnormal autonomic nervous function are the main causes^[1]. Migraine is a headache disease characterized by periodic and repeated attacks of temporal pulsating pain. Such patients are often accompanied by symptoms such as nausea, vomiting, chest tightness, photophobia, and phonophobia. The characteristics of chronic migraine such as recurrence significantly affects the patient's physiological and psychological wellbeing. This disease is classified into categories such as blood meridian disease (*longlubing*), sensing channel disease (*huolubing*), and "pain" (*bangyin*) in Zhuang medicine^[2-3]. In this study, relevant cases were selected, and a combination of Zhuang medicine and superior technology therapy was applied, and the clinical effect was remarkable. The results are summarized as follows.

2. Materials and methods

2.1. General information

80 patients with migraine were selected, all of whom were admitted to our hospital from February 2019 to February 2020. The patients were divided into two groups (40 patients each) by using the random number table method. The ratio of male to female of the control group was 27:13, aged between 18 and 36 years old, with an average age of 22.3 ± 1.4 years old; the average duration of disease of 11.2 ± 1.6 months, ranging from 3–24 months. The male to female ratio of the study group was 16:24, aged between 19–37 years old, with an average age of 22.4 ± 1.9 years old; the average duration of disease was 9.8 ± 0.9 , months, ranging from 3–26 months. There was no significant difference between the baseline data of the two groups were comparable ($P > 0.05$).

2.2. Inclusion and discharge standards

Inclusion criteria: (1) patients who meet the diagnostic criteria of migraine in western medicine and headache in Chinese medicine; (2) patients who have unilateral, bilateral, or generalized headache; (3) patients who have duration of attack of 4 hours or more, and recurs once a month and above; (4) never consumed analgesics or used analgesic methods or the analgesia was ineffective; (5) patients who voluntarily signed the informed consent, and reported to the hospital ethics committee for approval. Exclusion criteria: (1) patients with severe liver and kidney diseases, cardiovascular and cerebrovascular diseases, and hematopoietic system diseases; (2) patients with hypotension or other neurological diseases; (3) patients who received other migraine prevention, treatment drugs or hormone therapy within 30 days before treatment, which could interfere with the effect indicators of this study.

2.3. Method

2.3.1. Control group

Patients in this group were treated with routine western medicine. When acute attacks occurred, 2 tablets of ergotamine and caffeine tablets were taken orally immediately. If the pain subsided, the medication could be stopped. If the pain symptoms could not be effectively relieved after 30 minutes, patients could take 2 additional tablets, but the maximum dose of the drug within 24 hours was 6 tablets, and the maximum dose of the drug within a week was 10 tablets. If the patient had taken the maximum dose but the pain was still not relieved, then 5mg flunarizine capsule can be administrated. For patients with migraine in remission, 2 capsules of flunarizine were given every night after the headache symptoms were relieved.

2.3.2. Study group

The patients in this group were treated with a combination of Zhuang medicine's characteristic and superior techniques, that is, Zhuang medicine meridian tendon therapy + Zhuang medicine lotus needle cupping blood stasis removal therapy (Zhuang medicine blood pricking + Zhuang medicine cupping) + Zhuang medicine thread moxibustion therapy + Zhuang medicine medical acupuncture treatment.

2.3.2.1. Aponeurotic system therapy

Acupuncture needles, cotton swabs, povidone iodine, and treatment beds were prepared in advance. The thumb radial side dial method or the thumb and four fingers were used to form a "clamp archer" to untangle the "clustered nodules" to eliminate the focus of infectio; the process of the treatment was 10 minutes. Restoring and treating clustered nodules and checking for focus of infection can be performed at the same time, or checking for focus of infection can be performed before restoring and treating clustered nodules. The treatment was done once a day or 2 times a day for severe pain symptoms.

2.3.2.2. Zhuang medicine lotus needle cupping therapy for removing blood stasis

The Meihua acupoint (specific acupuncture points of Zhuang medicine along the periphery and middle of the patient's pain area), Taiyang, Fengchi, Dazhui and other acupoints were disinfected, using Zhuang medicine. The lotus needle was evenly pierced into the acupoints until slight bleeding, and cupping was quickly performed on the pierced part, and the cup was left for 15 minutes, then the cup is removed, and then the local disinfection was carried out. The procedure was performed one by one on each acupoints. If the Meihua acupoint was covered by hair, the lotus needle was tapped directly after disinfection until slight bleeding, with no cupping performed.

2.3.2.3. Moxibustion therapy with medicinal thread

The affected sides of Ashi, Zanzhu, Touwei, Shikui, were selected; while both sides of Taiyang, Fengchi, Zusanli, Neiguan, Shenmen, Sishencong, Baihui and other acupoints were selected. Moxibustion was carried out according to the "Zhuang medicine thread moxibustion therapy" method. In this method, the patient took a seat, and the doctor held the end of the thread with his thumb and index finger during the treatment, exposing the end of the thread by 1–2cm, and ignited the exposed end of the thread with alcohol to extinguish the flame. Pressing off the fire meant 1 Zhuang, and 1 Zhuang was given at each acupoint, and the patient would feel slight burning sensation at the moxibustion site. Moxibustion was only needed on the most painful part of the patient, and the Meihua-shaped moxibustion method was adopted, and then moxibustion was performed on other points. Moxibustion was done once a day, 1 Zhuang each time.

2.3.2.4. Acupuncture therapy

Major clustered nodules was selected, use a 1–2-inch needle (No. 28), apply pressure with the left thumb, and insert the needle using the right hand till the patient experience soreness, swelling, or numbness spreading to the surrounding area, if bleeding is found, blot it dry with a cotton swab until the bleeding stops, and then acupuncture for 5 minutes. Note that the left thumb should be used to compress the focus of infection effectively during acupuncture. The cooperation of both hands is conducive to rapid vertical needle insertion. Acupuncture 1 time a day.

The two groups of patients underwent 2 consecutive courses of treatment, 2 weeks for one course.

2.4. Observation indicators

The curative effect and immediate analgesic effect, headache scores before and after treatment, and adverse reaction rate of the two groups were observed and compared.

2.4.1. Evaluation of clinical curative effect

The curative effect of the two groups was evaluated according to the Nimodipine scoring method:

$$\text{Percentage of curative effect} = \frac{\text{Difference of headache scores before and after treatment}}{\text{Headache score before treatment}} \times 100\%$$

where curative effect between 90–100% is considered cured; 55-90% is considered markedly effective; 20-55% is considered effective; 0-20% is considered ineffective.

2.4.2. Evaluation of immediate analgesic efficacy

The patients were evaluated 30 minutes after the first treatment according to the visual analogue scale (VAS score) where they rated their pain on the scale of 0–10 on the scale, with 0 point for no pain to 10 points for severe pain.

2.4.3. Headache scores before and after treatment

Statistical analysis was performed on the headache scores of the two groups of patients before and after treatment according to the guiding principles of clinical research on new drugs of traditional Chinese medicine. (1) Frequency of headache attacks: calculated on a monthly basis, 6 points for more than 5 headaches per month; 4 points for 3–4 headaches per month, and less than 2 headaches per month 2 points. (2) The degree of pain at the onset: 6 points for having to stay in bed during the headache attack, 4 points for the impact on work during the headache attack, and 2 points for no impact on daily work during the headache attack. (3) Headache duration: 6 points for headache symptoms lasting more than 2 days, 4 points for headache symptoms lasting from 12 hours to 2 days, 2 points for headache symptoms lasting less than 12 hours. (4) Complication symptoms during an attack: 3 points and above if all nausea, vomiting, and photophobia occur, 2 points if accompanied by 2 of the complications, 1 point if accompanied by 1 of the complications. Finally, the scores of each item are added together to obtain a comprehensive score.

2.5. Statistical analysis

The data involved in this article were all statistically processed by SPSS 20.0, the measurement data is represented by (mean \pm SD); *t* test was performed, the count data is represented by *n* (%), and the χ^2 test was carried out, with *P* < 0.05 representing statistical significance.

3. Results

3.1. VAS scores after the first treatment

30 minutes after the first treatment, the average decrease in the VAS score of the observation group was better than that in the control group (*P* < 0.05), as shown in **Table 1**.

Table 1. VAS scores 30 minutes after the first treatment in the two groups (mean \pm SD, points)

Group	Number	Before treatment	After the first treatment	<i>t</i>	<i>P</i>
Study group	40	6.25 \pm 1.09	1.85 \pm 0.46	0.072	0.000
Control group	40	5.82 \pm 1.02	3.25 \pm 1.12	10.729	0.000
<i>t</i>		23.521	7.319		
<i>P</i>		0.072	0.000		

3.2. Headache score at the end of the course of treatment

After treatment, the headache score of the study group was lower than that of the control group (*P* < 0.05), as shown **Table 2**.

Table 2. Headache scores at the end of treatment in the two groups (mean \pm SD, points)

Group	Number	Before treatment	After first treatment	<i>t</i>	<i>P</i>
Study group	40	14.29 \pm 2.38	4.02 \pm 3.07	16.721	0.000
Control group	40	14.28 \pm 2.42	7.68 \pm 2.95	10.939	0.000
<i>t</i>		0.018	5.436		
<i>P</i>		0.985	0.000		

3.3. Comparison of efficacy between the two groups

After treatment, the total effective rate of the observation group was higher than that of the control group ($P < 0.05$), as shown in **Table 3**.

Table 3. Comparison of curative effect between the two groups [n (%)]

Group	Number	Recovered	Markedly effective	Effective	Ineffective	Total effective rate
Study group	40	15	14	10	1	97.50
Control group	40	5	10	16	9	77.50
χ^2						7.314
P						0.006

3.4. Comparison of adverse reactions between the two groups

During the treatment period, 2 patients in the study group had slight redness and swelling at the pricking site, but no suppuration, and recovered without treatment. The adverse reaction rate was 5.00%. In the control group, there were 2 cases with facial numbness, 5 cases with stomach pain, and 3 cases with myalgia. The adverse reaction rate was 25.00%. The rate of adverse reactions in the control group was significantly higher than that in the study group ($t = 6.274$, $P = 0.012$).

4. Discussion

Modern clinical medicine mainly treats migraine patients by relieving vasospasm and improving cerebral ischemia and hypoxia [4-7]. Among them, drugs such as β receptor blockers and calcium antagonists are widely used in clinical treatment and can achieve certain curative effects. However, patients often experience adverse reactions such as drowsiness, fatigue, dizziness, and difficulty in breathing after treatment, which leads to low compliance of patients with treatment. Therefore, it is crucial to seek effective treatment methods to improve the curative effect and safety of this disease [8-10]. Zhuang medicine believes that migraine belongs to the category of "pain," and believes that evil poisons such as wind, cold, and heat invade the body and stagnate between the internal organs and flesh, causing diseases; or due to the lack of qi and blood in the body, the poor flow of qi prevents the normal operation of the blood meridians and the sensing channels, which causes the patient to get sick. Therefore, for migraine patients, Zhuang medicine mainly adopts the treatment principles of regulating qi, detoxifying, and tonifying deficiency [11-13]. The meridian tendon therapy of Zhuang medicine mainly takes the most painful part of the patient, that is, the local clustered nodules on the head as the key stimulation site, and treats the Ashi point at the multi-focus point, which can allow the patient's clustered nodules on the muscle meridians to be fully relaxed. Zhuang medicine lotus needle cupping therapy, which combines blood pricking + organic cupping, can comprehensively exert the stimulating effects of blood pricking, cupping, and external application of medicines, and produce multiple effects. Among them, the lotus needle piercing can open the knots and pores of the blood channels and sensing channels on the body surface. The stagnant qi and blood can be sucked out of the patient's body surface through cupping, producing remarkable immediate analgesic effect. Moxibustion with Zhuang medicine thread can have therapeutic effects such as warming the meridian and dredging the numbness and collaterals and relieving pain, and strengthening the body. Moxibustion with medicinal threads can stimulate the patient's acupoints through warmth and medicinal effects, which is conducive to the dredging of qi and blood in the "three-passages" (the passage of digestion and absorption, the passage of gas exchange between the human body and the environment, and the passage of liquid in and out of the human body) and "two-paths" (the path of the blood, the path of the senses), and promotes

the synchronous operation of the three qi, which aids recovery, thereby achieving the purpose of treatment. Acupuncture therapy of Zhuang medicine is mainly based on the location of headache in migraine patients. The principle “from near to far” is followed in selecting acupoints. Acupuncture on the selected acupoints helps in reconciling yin and yang, promoting qi and blood circulation, regulating viscera, dredging meridians, transporting water and dampness, and regulating the spleen and stomach^[14-15].

5. Conclusion

In summary, for patients with migraine, the application of Zhuang medicine’s characteristic and superior technology combination therapy can significantly relieve pain symptoms, shorten the onset time of analgesic effect, improve clinical efficacy and safety, and reduce the incidence of adverse reactions, which has significant clinical value.

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Disclosure statement

The authors declare no conflict of interest.

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