

Clinical Effect of Warm Acupuncture and Moxibustion Combined with Traditional Chinese Herbs in Treating Cold-Damp Stagnation Dysmenorrhea

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Abstract: *Objective:* To investigate the clinical effect of warm acupuncture and moxibustion with traditional Chinese herbs in treating cold-damp stagnation dysmenorrhea. *Methods:* 76 patients with cold-damp stagnation dysmenorrhea admitted to our hospital were selected as the sample for study and evaluation, and the time of admission to the hospital was from January–December 2023. The patients were divided into an observation group ($n = 38$) and a control group ($n = 38$) using a random number table. The patients in the control group were treated with conventional Western analgesic drugs. In contrast, the patients in the observation group were treated with warm acupuncture and moxibustion together with traditional Chinese herbs. The clinical effective rate, traditional Chinese medicine (TCM) symptom score, NRS score, serum factor level, and the incidence rate of adverse reactions were compared between the two groups. *Results:* The clinical efficacy of the observation group was higher than that of the control group ($P < 0.05$); the TCM symptom score of the observation group was lower than that of the control group ($P < 0.05$); the PGF_{2a} and NRS scores of the observation group were lower than that of the control group, while the PGE₂ was higher than that of the control group ($P < 0.05$); the incidence rate of adverse reactions of the observation group was lower than that of the control group ($P < 0.05$). *Conclusion:* Warm acupuncture and moxibustion combined with traditional Chinese herbs are effective in treating patients with cold-damp stagnation dysmenorrhea. This treatment regime alleviates clinical symptoms, reduces the degree of pain, improves the level of serum factor, and reduces the incidence of adverse reactions. Therefore, it should be popularized.

Keywords: Warm acupuncture; Traditional Chinese medicine; Cold-damp stagnation dysmenorrhea

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1. Introduction

Dysmenorrhea has a high incidence in the female population, characterized by lower abdominal pain and swelling during, before, or after menstruation. Some patients experience lumbar pain and other discomfort, and the nature of the pain is mostly spasmodic, which may radiate to the inner thighs, lumbosacral region, and

other areas ^[1]. Dysmenorrhea heavily impacts the physical and mental state of women, so proper measures should be taken to relieve their pain quickly. In Western medicine, analgesic and sedative drugs are often used to treat dysmenorrhea symptomatically. While these medications provide short-term pain relief, the pain still recurs during the next menstrual cycle. In Chinese medicine theory, the main evidence of dysmenorrhea is cold-damp stagnation, cold damage to yang qi, and poor blood circulation. Hence, the treatment is aimed at activating blood circulation, warming menstruation, and dissipating cold ^[2]. Traditional Chinese herbs and warm acupuncture are commonly used traditional Chinese medicine (TCM) treatment programs. In this study, 76 patients with dysmenorrhea due to cold-dampness stagnation were selected as samples for evaluation, and the clinical effects of warm acupuncture with traditional Chinese herbs were analyzed.

2. Information and methods

2.1. General information

76 patients with cold-damp stagnation dysmenorrhea admitted to our hospital were selected as the sample for study and evaluation, and the time of admission to the hospital was from January–December 2023. The patients were divided into an observation group ($n = 38$) and a control group ($n = 38$) using a random number table. The observation group had an age range of 24 to 37 years, with a mean age of 30.58 ± 2.79 years, and a disease duration range of 1 to 4 years, with a mean duration of 2.42 ± 0.51 years. Similarly, the control group had an age range of 26 to 36 years, with a mean age of 30.65 ± 2.72 years, and a disease duration range of 1 to 3 years, with a mean duration of 2.38 ± 0.55 years. Statistical analysis revealed no significant differences in the general characteristics between the two groups ($P > 0.05$).

Inclusion criteria: (1) Diagnosed with dysmenorrhea based on the criteria in “Obstetrics and Gynecology,” (2) evidence of cold-damp stagnation, (3) no organic lesions of the reproductive system.

Exclusion criteria: (1) Secondary dysmenorrhea, (2) combined with endometriosis or uterine fibroids. (3) Combined with major organ dysfunction, malignant tumor, infectious disease. Allergy to the study drugs.

2.2. Methods

The patients in the control group received treatment with conventional Western analgesics, specifically sustained-release ibuprofen capsules. These were administered once daily beginning one day before the onset of the menstrual cycle, taken orally twice a day at a dose of 200 mg per administration. This regimen continued throughout the menstrual cycle, spanning a total of two menstrual cycles.

The observation group was treated with warm acupuncture, moxibustion, and traditional Chinese herbs. The treatment was initiated 3d before the menstrual cycle and continued for 3 d after the end of the menstrual cycle, for a total of 2 menstrual cycles.

(1) Warm acupuncture treatment

Based on the patients’ individual conditions and principles from Chinese medicine meridians theory, physicians selected specific acupuncture points including Taichong, Hegu, Sanyinjiao, Xuehai, and Diji. They sterilized the skin at these acupuncture points and applied pressure for 5 seconds before directly inserting milliprecision needles. Subsequently, a technique involving gentle lifting and thrusting motions was applied to the needles for 30 seconds. Moxa sticks were then lit and placed above the needle handles, with one strong moxa stick used for each acupoint. The distance between the moxa stick and the skin was maintained at 3cm to produce a sensation of warmth in the local skin tissue. This warm acupuncture and moxibustion treatment was administered once daily, with each session lasting for 30 minutes.

(2) Traditional Chinese herbs

Si Ni soup was administered. The soup consisted of 9 g Gui Zhi, 12 g Angelica sinensis, 3g Xi Xin, 6g Tong Cao, 8g jujube, and 6 g baked licorice. The composition of the soup was adjusted according to the principle of dialectic treatment. For patients experiencing insomnia, 5g Yuan Zhi, 6 g Fu Shen, and 10g Shouwu vine were added. In cases of qi deficiency, 10g of *Astragalus membranaceus* and 10g of Tai Zi Shen were included. For patients with qi stagnation, 6g of *Pericarpium citri reticulatae*, 4g of citron, and 5g of *Pinellia ternata* were added. The medication was taken twice a day, and 150 mL each time, once in the morning and the evening.

2.3. Evaluation criteria

The treatment was considered very effective if dysmenorrhea-related symptoms disappeared after treatment and the TCM symptom score decreased by more than 70%. The treatment was considered effective if dysmenorrhea-related symptoms decreased after treatment and the TCM symptom score decreased by 50–70%. If the aforementioned criteria were not met, the treatment was considered ineffective. (2) Symptoms like abdominal coldness, lumbosacral pain, and coldness of limbs were evaluated according to the standards in the “Guidelines for Clinical Research of New Traditional Chinese Medicines” before and after treatment, with the highest score of each item being 3 points. (3) The Numeric Rating Scale (NRS) score, ranging from 0 to 10, was employed to gauge pain severity, with higher scores indicating more severe pain. Serum factor levels, including PGF2a and PGE2, were also measured via ELISA from blood samples collected before treatment and during the two menstrual cycles of treatment. (4) Adverse reactions in both groups were documented and statistically analyzed.

2.4. Statistical methods

SPSS23.0 was used to analyze the data. The measurement data were expressed as mean \pm standard deviation and analyzed by a *t*-test, while the count data were expressed as percentages and analyzed by a χ^2 . $P < 0.05$ indicated statistical significance.

3. Results

3.1. Clinical efficacy

The clinical efficacy of the treatment received in the observation group was higher than that of the control group ($P < 0.05$), as shown in **Table 1**.

Table 1. Comparison of the clinical effectiveness rate of the two groups (*n*/%)

Groups	Very effective	Effective	Ineffective	Overall efficacy
Observation group (<i>n</i> = 38)	28	8	2	36 (94.70)
Control group (<i>n</i> = 38)	20	9	9	29 (76.30)
χ^2				5.208
<i>P</i>				0.022

3.2. TCM symptom score

After treatment, the TCM symptom scores of the observation group were lower than those of the control group ($P < 0.05$), as shown in **Table 2**.

Table 2. Comparison of TCM symptoms points between the two groups (mean ± standard deviation)

Groups	Cold pain in the abdomen		Lumbosacral pain		Coldness in the limbs	
	Pre-treatment	Post-treatment	Pre-treatment	Post-treatment	Pre-treatment	Post-treatment
Control group (n = 38)	2.18 ± 0.46	0.75 ± 0.12	2.07 ± 0.41	0.69 ± 0.11	2.14 ± 0.42	0.81 ± 0.15
Observation group (n = 38)	2.23 ± 0.44	1.29 ± 0.36	2.12 ± 0.38	1.07 ± 0.32	2.09 ± 0.41	1.36 ± 0.42
<i>t</i>	0.484	8.772	0.551	6.923	0.525	7.602
<i>P</i>	0.630	0.000	0.583	0.000	0.601	0.000

3.3. NRS score and serum factor levels

After treatment, the PGF2a and NRS scores of the observation group were lower than those of the control group. However, the PEG2 score of the observation group was higher than that of the control group ($P < 0.05$), as shown in **Table 3**.

Table 3. Comparison of NRS scores and serum factor levels between the two groups (mean ± standard deviation)

Groups	NRS score		PGE2 (g/mL)		PGF2a (g/mL)	
	Pre-treatment	Post-treatment	Pre-treatment	Post-treatment	Pre-treatment	Post-treatment
Control group (n = 38)	4.01 ± 0.62	1.24 ± 0.29	21.53 ± 3.19	29.77 ± 4.82	38.96 ± 3.74	28.25 ± 1.85
Observation group (n = 38)	3.97 ± 0.55	2.41 ± 0.58	21.49 ± 3.26	25.16 ± 2.05	39.02 ± 3.68	33.25 ± 2.76
<i>t</i>	0.298	11.122	0.054	5.426	0.070	9.276
<i>P</i>	0.767	0.000	0.957	0.000	0.944	0.000

3.4. Incidence rate of adverse reactions

The incidence rate of adverse reactions in the observation group was lower than that in the control group ($P < 0.05$), as shown in **Table 4**.

Table 4 Comparison of adverse reactions between the two groups (n/%)

Groups	Abdominal pain	Nausea and vomiting	Rash	Incidence of adverse reactions
Observation group (n = 38)	1	0	1	2 (5.3)
Control group (n = 38)	3	3	2	8 (21.1)
χ^2				4.145
<i>P</i>				0.041

4. Discussion

Relevant data and statistics show that about 60% of women have experienced dysmenorrhea, with the main symptoms being pain and swelling in the lower abdomen during menstruation. Such pain can lead to dizziness, fatigue, paleness, and cold sweat^[3]. The symptoms are mostly recurrent, which can affect the patients' work and life, so it is necessary to take effective treatment programs as early as possible.

The results of this study confirmed that the clinical efficacy of the treatment received in the observation group was higher than that of the control group. This suggests that warm acupuncture and moxibustion combined with traditional Chinese herbs are extremely effective in treating patients with cold-damp stagnation dysmenorrhea. In contrast, Western medicine typically relies on symptomatic supportive drug interventions for

dysmenorrhea, such as ibuprofen extended-release capsules, a type of non-steroidal anti-inflammatory drug. While these medications can alleviate pain symptoms, their efficacy tends to be short-lived, and prolonged use may lead to adverse reactions ^[4]. According to the principles of Chinese medicine, dysmenorrhea is categorized as menstrual abdominal pain, primarily attributed to cold and damp stagnation. The invasion of cold into the body can weaken yang qi, leading to congestion in the blood vessels, stagnation of qi, and blood stasis. Treatment strategies aim to warm menstruation, dispel cold, and promote blood circulation. Warm acupuncture and moxibustion are external treatment techniques in TCM combining the advantages of both acupuncture and moxibustion. By stimulating specific acupuncture points with warmth, these modalities effectively disperse cold, regulate blood circulation, and improve local blood flow. This process enhances metabolism, suppresses pain stimuli, and ultimately alleviates painful symptoms associated with dysmenorrhea ^[5]. Si Ni soup is a traditional Chinese medicine formula renowned for its clinical efficacy in alleviating pain, resolving blood stasis, and warming menstruation while dispelling cold. This formula combines various medicinal ingredients to achieve these therapeutic effects. When combined with warm acupuncture and moxibustion, there is a synergistic effect between the herbal components and external therapy. This combination therapy effectively regulates the flow of qi and blood, expels cold evils from the body, and enhances local stimulation. As a result, it significantly alleviates dysmenorrhea symptoms. Moreover, this treatment approach offers durable and stable efficacy, surpassing that of single Western medicine treatment protocols. Its comprehensive clinical benefits underscore its superiority in managing dysmenorrhea ^[6].

In this study, the TCM scores of the observation group were lower than those of the control group after treatment, suggesting that the use of warm acupuncture and moxibustion together with traditional Chinese herbs in patients with cold-damp stagnation dysmenorrhea can effectively alleviate a variety of symptoms. Western medicine primarily addresses dysmenorrhea with pain-relieving and sedative medications. However, upon discontinuation of these drugs, dysmenorrhea often recurs, and related symptoms persist. In contrast, the TCM treatment regimen integrates acupuncture and moxibustion techniques to warm menstruation, alleviate pain, and promote blood circulation while removing blood stasis. By gently manipulating the needles at multiple acupoints and utilizing moxibustion to clear qi through warm stimulation of the skin, this approach effectively expels cold from the body. Additionally, the internal consumption of Si Ni soup further enhances treatment efficacy, leading to the alleviation of numerous symptoms ^[7,8].

In this study, the observation group exhibited lower levels of PGF2a and NRS scores compared to the control group, while PGE2 levels were higher in the observation group. These findings suggest that warm acupuncture combined with Chinese medicine effectively reduces pain and modulates serum factor levels. The NRS score provides an objective and accurate measure of patient pain levels, with higher scores indicating more severe pain. While analgesic drugs like ibuprofen can provide short-term pain relief, dysmenorrhea often recurs after discontinuation. In contrast, warm acupuncture and moxibustion, when combined with Chinese herbal medicine, offer multifaceted pain relief. Internal Chinese medicine regulates qi mechanisms, resolves blood stasis, and alleviates pain by improving qi and blood circulation. Warm acupuncture and moxibustion inhibit inflammatory factor release, stimulate nerve tissues, and warm menstruation while dispelling cold, addressing the underlying pathogenesis of cold-damp stagnation and reducing pain severity. Clinical research indicates that dysmenorrhea induces abnormal changes in uterine tone, leading to excessive spasm or contraction, resulting in elevated PGF2a levels. Conversely, PGE2 inhibits uterine smooth muscle activity, promoting uterine relaxation ^[9]. The combination of warm acupuncture, moxibustion, and Chinese herbal medicine offers multifaceted analgesia, significantly alleviating pain symptoms and reducing the stimulatory effects of pain on uterine contractions, thereby improving overall serum factor levels. Moreover, the observation group exhibited a lower incidence of

adverse reactions compared to the control group. This discrepancy can be attributed to the strong stimulating effect of ibuprofen extended-release capsules on the body, potentially leading to adverse reactions with long-term use. In contrast, warm acupuncture, as an external treatment modality, poses minimal irritation to bodily tissues and organs, thus ensuring higher therapeutic safety. Si Ni soup, being a purely traditional Chinese medicine formula composed of natural substances, exerts mild stimulation on the body, making it well-tolerated by most patients. The combination of these two treatment interventions results in a low incidence of serious adverse reactions, indicating a high level of therapeutic safety. Therefore, these combined therapies are suitable for widespread adoption in medical institutions^[10].

5. Conclusion

In summary, the effectiveness of warm acupuncture and moxibustion combined with traditional Chinese herbs in treating cold-damp stagnation dysmenorrhea. This approach effectively alleviates clinical symptoms, reduces pain severity, and improves serum factor levels, all while exhibiting a lower incidence of adverse reactions. Consequently, it is well-suited for widespread adoption. However, it is important to note that this study had limitations. The sample size of this study was relatively small, and cross-center data analysis was not conducted. Therefore, further research is needed to thoroughly explore the specific mechanisms underlying the effectiveness of warm acupuncture and moxibustion combined with traditional Chinese herbs.

Disclosure statement

The author declares no conflict of interest.

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