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Postprint: Observation of Therapeutic Effects of Traditional Chinese Medicine Wax Therapy Technique in a Patient with Muscle Bi Syndrome

Authors: Hu Mengyue, Li Suqian, Tang Ling, Lu Lin

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Abstract

Purpose: To investigate the clinical efficacy of traditional Chinese medicine wax therapy in patients with myalgia. Methods: A patient with myalgia admitted to our department was selected to receive traditional Chinese medicine wax therapy nursing technique, with therapeutic effects evaluated using the Numerical Rating Scale (NRS) for pain and the Barthel Index for self-care ability. Results: Following nursing care with the TCM wax therapy technique, the patient' s pain score (NRS) decreased while the self-care ability score (Barthel Index) increased. Conclusion: Wax therapy demonstrates significant therapeutic efficacy for myalgia patients, with no adverse reactions observed to date, warranting wider clinical application.

Full Text

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Corresponding Author: LI Suqian, 648152629@qq.com

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Observation on the Effect of Traditional Chinese Medicine Wax Therapy in a Case of Muscle Arthralgia

HU Mengyue[1], LI Suqian[1], TANG Ling[2], LU Lin[1]
(1. Department of Rheumatology, Dongfang Hospital Beijing University of Chinese Medicine, Beijing 100078;
2. Department of Nursing, Dongfang Hospital Beijing University of Chinese Medicine, Beijing 100078)

Abstract

Objective: To observe the clinical effect of traditional Chinese medicine (TCM) wax therapy in a patient with muscle arthralgia. **Methods:** A single case of muscle arthralgia admitted to our department was treated with TCM wax therapy and TCM nursing techniques. Treatment efficacy was evaluated using the Numerical Rating Scale (NRS) for pain and the Barthel Index for activities of daily living. **Results:** Following TCM wax therapy nursing intervention, the patient' s pain score (NRS) decreased while the self-care ability score (Barthel Index) improved. **Conclusion:** Wax therapy demonstrates good therapeutic effects for muscle arthralgia patients with no observed adverse reactions, warranting broader clinical application.

Keywords: pain; wax therapy; muscle arthralgia; TCM nursing

Muscle arthralgia, one of the five body-region impediments, is a rheumatic disease caused by spleen-stomach damage or invasion of the muscles by pathogenic wind-cold-dampness or heat-toxins, leading to blocked collaterals, qi stagnation, and blood stasis. Clinical manifestations include persistent pain and soreness in one or multiple muscle groups, progressive numbness, muscular flaccidity and weakness, and even muscle atrophy with potential damage to multiple internal organs [1].

As a characteristic TCM nursing technique, wax therapy promotes blood circulation, removes blood stasis, warms the meridians, and relieves pain. Clinical studies [2] have demonstrated significant efficacy of wax therapy in treating muscle arthralgia. The thermal properties of paraffin produce anti-inflammatory and analgesic effects [3], with local skin temperature rising to 40–45°C and remaining sustained throughout treatment [4].

We report a case of muscle arthralgia in our department that achieved satisfactory nursing outcomes through wax therapy intervention.

Case Report

Patient Information

A 52-year-old female presented with a 30-year history of recurrent muscle pain in multiple body regions. One year prior to admission, she experienced exacerbated pain in the gluteal region and bilateral gastrocnemius muscles without obvious precipitating factors, affecting her mobility. She was admitted for further diagnosis and treatment. At admission, the patient was alert and articulate, with severe persistent distending pain in bilateral psoas major and gastrocnemius muscles that worsened at night. The affected areas felt numb to touch, without morning stiffness. Bilateral metacarpophalangeal joints (proximal and distal) and metacarpal bones were painful upon exposure to cold. She reported difficulty falling asleep, light and easily disturbed sleep, irritable temperament, and average appetite. Bowel movements occurred every 1–2 days with normal consistency but required straining and felt incomplete. Vital signs: temperature

36.2°C, pulse 70 beats/min, respiration 18 breaths/min, blood pressure 100/80 mmHg, oxygen saturation 100%. Tongue appearance: pale and dark with a thin dry coating. Pulse: slow.

Nursing Assessment

Pain Assessment: Pain intensity was evaluated using the Numerical Rating Scale (NRS) [5], with scores ranging from 1–10, where lower scores indicate less severe pain. The patient' s admission NRS score was 8, indicating severe pain. **Functional Assessment:** Self-care ability was assessed using the Barthel Index [6], which evaluates activities such as stair climbing, bed-to-chair transfers, and ambulation, with a maximum score of 100. Higher scores indicate better quality of life. The patient' s admission Barthel score was 45, indicating severe functional impairment.

TCM Wax Therapy Nursing Technique

Procedure: Solid paraffin was melted in a wax pot at 45–50°C. Three hundred milliliters of liquid paraffin was poured into a 24 cm × 17 cm plastic sealing bag with air removed. TCM granules prescribed according to the patient's condition were mixed with warm water at a 1:2 ratio to achieve moderate humidity, then evenly spread on non-woven fabric. The prepared medicated wax was applied to the treatment area at 39–43°C, covered with the paraffin bag, then wrapped with 20 cm-wide plastic film to enhance thermal retention [7]. **Treatment Frequency:** Five sessions per week, 30 minutes per session, with two weeks constituting one treatment course.

Dietary Nursing

Historical TCM texts including Sun Simiao' s *Emergency Formulas to Keep Up Your Sleeve* and Wang Tao' s *Secret Essentials from the Outer Court* from the Tang Dynasty mention the term "flesh exhaustion,"whose clinical manifestations and pathogenesis closely relate to muscle arthralgia. Zhu Zhenheng of the Yuan Dynasty stated in *Pulse, Cause, Syndrome, and Treatment*: "Flesh impediment results from improper diet and rich, fatty foods." Qing Dynasty physician Shen Jin'ao proposed the treatment principle that "muscle numbness must be resolved by purging nutritive qi" [8].

Therefore, patients with muscle arthralgia should avoid rich, greasy, fried, and spicy foods, favoring light and easily digestible meals. They should prevent overeating and abstain from smoking and alcohol.

Lifestyle Nursing

Patients should engage in appropriate exercise while avoiding weight-bearing on small joints and poor postures such as bending at the waist. Emotional stability

should be maintained to prevent internal injury from the seven emotions. Patients must dress appropriately according to weather changes, wear protective wrist and knee supports, and ensure adequate warmth to avoid cold exposure [9].

Psychological Nursing

Due to disease recurrence, varying degrees of joint pain, and sometimes suboptimal treatment outcomes, patients often experience low mood and anxiety. Positive emotions facilitate smooth qi and blood flow, harmonize organ function, and enhance pathogenic resistance [10]. Therefore, nursing staff should establish good nurse-patient relationships, master communication skills, actively comfort patients, encourage optimistic and healthy attitudes, build treatment confidence, and promote cooperation with therapy and nursing care to facilitate recovery.

Results and Follow-up

Following wax therapy and related nursing interventions, the patient' s pain score decreased and self-care ability improved. Specific scores showed NRS reduction from 8 at admission to 3 at discharge, with corresponding improvement in Barthel Index scores. The patient demonstrated good compliance and tolerance to TCM wax therapy nursing with no adverse reactions observed.

Discussion

Muscle arthralgia is defined as a condition characterized by muscle numbness, atrophy, flaccidity, and weakness resulting from spleen-stomach damage, external pathogen invasion, blocked collaterals, qi stagnation, blood stasis, and malnourished muscles [11]. The term first appeared in the *Inner Canon*, describing symptoms such as "whole-body skin pain" and "numbness when located in the flesh." The Han Dynasty text *Central Treasury Canon: On Flesh Impediment* introduced the term "flesh impediment," noting: "The manifestation of flesh impediment is initially normal appetite without satisfaction, with limbs too weak to hold objects," emphasizing the crucial role of spleen-stomach transportation function in pathogenesis [12]. The spleen and stomach are the source of qi and blood production; the spleen governs transformation and transportation, manifests in the flesh, and governs the four limbs [13]. When spleen-stomach function is impaired, qi and blood production is compromised, preventing the distribution of water and grain essence to nourish limb muscles and joints, resulting in flaccidity, muscle pain, and weakness. Historical physicians consistently discussed muscle arthralgia, primarily focusing on etiology and pathogenesis.

In summary, the disease pathogenesis encompasses three major aspects: "deficiency, pathogen, and stasis" [14-16]. The disease location is in the muscles, potentially involving the skin, and is closely related to the spleen and stomach organs. External causes involve the six exogenous pathogenic factors combined

with toxic heat, while internal causes center on spleen-stomach deficiency. Obstruction causes pain. The disease is primarily deficient, with spleen-stomach deficiency as the main pattern. Pathogens are dominated by dampness, accompanied by wind, cold, heat, and toxins. Stasis arises from phlegm and qi stagnation.

TCM wax therapy formulates prescriptions based on disease etiology, pathogenesis, and symptom characteristics. Leveraging wax therapy' s thermal, mechanical, and chemical effects combined with herbal pharmacological actions, the treatment facilitates rapid and effective drug penetration through the skin to reach the disease site [17]. Through external treatment of internal disease, from surface to interior, and diaphoresis without damaging nutritive qi and defensive qi, it achieves the purposes of activating blood, unblocking collaterals, reducing swelling, and relieving pain [18]. Our department' s self-formulated wax therapy formula comprises Cyathulae Radix, Achyranthis Bidentatae Radix, Cinnamomi Cortex, Artemisiae Argyi Folium, Sinapis Semen, Pinelliae Rhizoma Praeparatum, Asari Radix et Rhizoma, Corydalis Rhizoma, Curcumae Rhizoma, Dipsaci Radix, Angelicae Pubescentis Radix, and Clematidis Radix, possessing wind-dampness dispelling, cold-dispersing, and collateral-unblocking analgesic effects. The integration of this herbal formula with wax therapy demonstrates significant symptom improvement for joint pain relief. TCM wax therapy features non-invasiveness, minimal discomfort, few side effects, definite efficacy, and convenient operation, making it readily acceptable to patients.

Patient Consent: Informed consent for publication of this case report was obtained from the patient and family members.
Conflict of Interest Statement: The authors declare no conflicts of interest.

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