

Fire Dragon Cupping Comprehensive Moxibustion Combined with TCM Syndrome Differentiation Nursing for Knee Osteoarthritis: A Nursing Case Report

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Abstract

This article primarily analyzes and summarizes a case of a patient undergoing rehabilitation for knee osteoarthritis (KOA) who, on the basis of conventional Western medicine treatment, received comprehensive fire dragon cupping moxibustion therapy supplemented with nursing care based on TCM syndrome differentiation, including dietary regulation and emotional guidance. Changes in clinical symptoms, knee joint range of motion (ROM), Visual Analogue Scale (VAS) pain score, and Activities of Daily Living (ADL) score were observed. Following two treatment courses, the patient's clinical symptoms improved significantly, with knee joint ROM increasing from 100° pre-treatment to 120°, VAS score decreasing from 7 points to 2 points, and ADL score increasing from 65 points to 90 points, effectively improving joint function and quality of life in KOA patients and warranting clinical promotion and application.

Full Text

Preamble

A Nursing Case Report on Knee Osteoarthritis Treated with Comprehensive Fire Dragon Jar Moxibustion Combined with Traditional Chinese Medicine Syndrome Differentiation and Nursing Care

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Abstract

This article analyzes and summarizes the case of a patient with knee osteoarthritis (KOA) undergoing rehabilitation. Based on conventional Western medicine treatment, the patient received comprehensive fire dragon jar moxibustion therapy supplemented by traditional Chinese medicine (TCM) syndrome differentiation and nursing care, including dietary regulation and emotional counseling. Changes in clinical symptoms, knee range of motion (ROM), visual analogue scale (VAS) pain scores, and activities of daily living (ADL) scores were observed. After two treatment courses, the patient's clinical symptoms improved significantly: knee ROM increased from 100° to 120°, VAS score decreased from 7 to 2 points, and ADL score increased from 65 to 90 points. This approach effectively improved joint function and quality of life for KOA patients and warrants clinical promotion and application.

Keywords: Knee osteoarthritis; Fire dragon jar comprehensive moxibustion; Traditional Chinese medicine nursing

Introduction

Knee osteoarthritis (KOA) is a common degenerative joint disease characterized by knee pain, stiffness, and limited mobility, which can lead to disability in severe cases. With population aging, the incidence of KOA has been increasing annually, seriously affecting the quality of life among middle-aged and elderly individuals [1]. In traditional Chinese medicine, KOA belongs to the categories of “Crane’s Knee Wind” and “Bi Syndrome,” with pathological location in the tendons and bones, closely related to liver-kidney deficiency and impaired qi and blood circulation. Inheritance and innovation constitute important content for TCM development [2]. Fire dragon jar comprehensive moxibustion is an emerging external TCM therapy that integrates multiple therapeutic effects including moxibustion, scraping, massage, and hot compress, whose efficacy in relieving joint pain and improving joint function has been clinically confirmed [3]. However, local treatment alone often fails to fully mobilize the body’s self-regulation capacity and holistically improve quality of life for KOA patients. TCM syndrome differentiation and nursing emphasizes individualized and holistic care concepts, providing comprehensive interventions from aspects such as diet, daily living, and emotional regulation to enhance body resistance and reduce complications [4]. This study employed fire dragon jar comprehensive moxibustion combined with TCM syndrome differentiation and nursing to intervene in one KOA patient for 20 days, achieving satisfactory results. The report follows.

Case Report

The patient was a 67-year-old female admitted on November 18, 2023, with a chief complaint of “bilateral knee joint pain with swelling and limited mobility for over 3 years, worsening for 2 months.” Three years prior, she developed

bilateral knee pain without obvious precipitating factors, more severe in the right knee, exacerbated when climbing stairs, and alleviated by hot compress and massage. Over the past two months, pain had significantly worsened with swelling and limited flexion-extension movement, accompanied by morning stiffness that intensified in cold weather. She was previously diagnosed with “knee osteoarthritis” at a local hospital and treated with oral anti-inflammatory analgesics and intra-articular sodium hyaluronate injections with poor efficacy. The patient reported excessive sweating for the past two years, nocturia, soreness in the waist and knees, and cold intolerance in extremities. Tongue presentation was pale with white coating, and pulse was deep and thready.

Physical examination revealed mild swelling of both knee joints, more pronounced in the right knee. Skin temperature was not elevated. Right knee tenderness was positive (+), left knee tenderness was mildly positive (\pm), with no effusion in bilateral suprapatellar bursae. Bilateral knee flexion was approximately 100° with -5° extension, and bony crepitus could be palpated during movement. Muscle strength in all four limbs was grade V.

Western medical examinations included knee X-ray revealing obvious joint space narrowing, bone sclerosis, and osteophyte formation—classic radiographic signs consistent with knee osteoarthritis. According to the Kellgren-Lawrence grading system, the patient’s condition was classified as grade III, indicating moderate-to-severe disease progression. MRI further confirmed the extent and degree of cartilage degeneration and bone hyperplasia, providing important basis for subsequent treatment planning.

The treatment protocol consisted of fire dragon jar comprehensive moxibustion administered once daily for 30 minutes, with 10 sessions constituting one course. A total of two courses were completed. Patient responses were continuously assessed during treatment, with heat intensity adjusted as necessary to avoid skin burns. After two courses of fire dragon jar comprehensive moxibustion and TCM syndrome differentiation nursing, the patient’s clinical symptoms markedly improved, and she was discharged on December 11, 2023.

Nursing Care

Nursing Assessment

Three primary assessment tools were employed: (1) Visual Analogue Scale (VAS): Patients marked their subjective pain level on a 10 cm horizontal line, where 0 represents no pain and 10 represents unbearable pain. Initial assessment revealed a self-reported pain level of 7 points, indicating significant impact on daily life. (2) Knee Range of Motion (ROM): Measured using a goniometer, the patient’s ROM was only 100°, substantially below normal levels and indicating limited joint mobility. (3) Activities of Daily Living (ADL) Scale: Using the Barthel Index, which assesses 10 aspects including feeding, bathing, dressing, and toileting (total score 100, with higher scores indicating greater independence), the patient’s pre-treatment ADL score was 65 points, indicating

moderate impairment in self-care ability.

Nursing Diagnoses

Based on systematic assessment, the following nursing diagnoses were identified: (1) Acute pain, closely related to KOA pathological changes such as articular cartilage degeneration and osteophyte formation; (2) Impaired physical mobility, resulting from joint swelling and pain; (3) Anxiety, potentially associated with persistent pain and concerns about prognosis; (4) Self-care deficit, caused by pain and mobility limitations; and (5) Sleep disturbance, primarily due to nocturnal pain exacerbation.

Nursing Plan

A personalized nursing plan was developed to address these diagnoses: (1) Administer fire dragon jar comprehensive moxibustion on the basis of conventional Western medicine treatment to exert the warming-channel and collateral-unblocking, swelling-reducing and pain-relieving effects of TCM external therapy; (2) Simultaneously strengthen TCM syndrome differentiation and nursing, providing comprehensive interventions including dietary regulation and emotional counseling to fully embody TCM's disease prevention and holistic regulation characteristics; (3) Implement psychological nursing through communication and active listening to alleviate patient anxiety and enhance confidence in overcoming the disease; (4) Guide patients through progressive and appropriate knee functional exercises to avoid overburdening inflamed joints while promoting mobility and preventing muscle atrophy; and (5) Educate patients on the importance of regular medication adherence and provide guidance on improving sleep environment and relaxation training for insomnia.

Nursing Implementation

During implementation, all nursing measures were strictly performed according to physician orders with patient-centered care. Fire dragon jar comprehensive moxibustion was administered once daily, selecting affected-side acupoints including Xiyan (EX-LE5), Xuehai (SP-10), Yanglingquan (GB-34), and Zusanli (ST-36). Medium-sized fire dragon jars were applied using massage, rotation, and twisting techniques to generate moderate negative pressure and heat, achieving local skin redness with appropriate warm sensation for 30 minutes per session. Post-treatment, patients were instructed to keep warm and avoid cold exposure.

For dietary nursing, based on TCM theory that “the liver governs tendons, the kidneys govern bones, and the spleen commands blood,” patients were encouraged to consume warming yang-supporting foods such as beef, mutton, and chicken, along with fresh vegetables and fruits rich in vitamins to improve tendon-bone health and immune function. They were advised to chew thoroughly, eat smaller frequent meals, and avoid raw, cold, and greasy foods to

reduce spleen-stomach burden. Emotional nursing emphasized active communication to understand psychological status and provide targeted counseling. Functional exercise guidance was provided to mobilize self-regulation capacity and enhance therapeutic effects.

Nursing Evaluation

After two courses of comprehensive nursing care, the patient's clinical symptoms improved significantly. Results showed VAS score decreased from 7 to 2 points, indicating substantial pain reduction; ROM increased from 100° to 125°, demonstrating enhanced joint mobility; and ADL score increased from 65 to 90 points, indicating marked improvement in daily living abilities. During two months of follow-up, no pain exacerbation was observed and joint function remained stable, suggesting reliable therapeutic efficacy.

Results and Follow-up

Following two courses of fire dragon jar comprehensive moxibustion and TCM syndrome differentiation nursing, the patient experienced significant alleviation of knee pain, resolution of swelling, increased range of motion, and improvement in sleep quality and emotional status. Comparative analysis of pre- and post-treatment indicators revealed VAS score decreased from 7 to 2 points, ROM increased from 100° to 125°, and ADL score increased from 65 to 90 points, demonstrating symptomatic improvement and enhanced joint function and quality of life. To consolidate therapeutic effects, a two-month telephone follow-up was conducted, during which patients were advised to maintain healthy lifestyle practices including reasonable diet and moderate exercise. Results showed stable efficacy with no symptom recurrence.

Discussion

KOA is a common chronic joint disease characterized primarily by articular cartilage degeneration and destruction, secondary bone hyperplasia and remodeling, ultimately leading to joint deformity and functional loss [6]. Current understanding suggests its pathogenesis involves multiple factors including age, gender, obesity, trauma, and genetics, though specific etiology remains incompletely elucidated [7]. Western medicine treatment primarily involves oral non-steroidal anti-inflammatory drugs, local injections, and arthroscopic surgery, but long-term efficacy is suboptimal and complications such as gastrointestinal reactions and joint infections are common [8].

Traditional Chinese medicine classifies KOA under “Crane’s Knee Wind” and “Bi Syndrome,” attributing it primarily to age-related decline, liver-kidney deficiency, or exposure to wind-cold-damp evils causing prolonged blockage and pain due to obstruction. Treatment should focus on supplementing liver-kidney, dispelling wind-cold, and activating blood to unblock collaterals [9]. In recent years, characteristic TCM therapies such as acupuncture, massage, fumigation,

and herbal poultices have gained increasing attention in KOA prevention and treatment [10]. Fire dragon jar comprehensive moxibustion combines multiple techniques including moxibustion, scraping, and massage to exert warming and channel-unblocking, qi-moving and blood-activating effects through meridian acupoints and local hot compress.

TCM emphasizes “treating the root cause” and syndrome differentiation and treatment. This patient presented with knee pain and swelling, morning stiffness, preference for warmth and aversion to cold, soreness in waist and knees, pale tongue with white coating, and deep thready pulse, which was differentiated as cold-damp Bi obstruction syndrome. The therapeutic principle was warming meridians and unblocking collaterals, dispelling cold-dampness, and concurrently supplementing liver-kidney. Combining local fire dragon jar comprehensive moxibustion with comprehensive nursing interventions including dietary regulation and emotional counseling achieved the effect of treating both root and branch. Diet should emphasize warming and yang-supporting foods while avoiding raw, cold substances.

In summary, fire dragon jar comprehensive moxibustion combined with TCM syndrome differentiation and nursing represents an effective method for treating KOA. Its advantages include simple operation, rapid effect, minimal adverse reactions, and good patient acceptance, making it worthy of clinical promotion and application. However, this study is only a case report with low level of evidence, and large-sample randomized controlled studies are needed for further validation. Additionally, stimulating therapies such as fire dragon jar require appropriate control of heat intensity and technique, placing higher demands on patient compliance and tolerance. In conclusion, integrated Chinese-Western medicine and comprehensive prevention will become the inevitable trend in KOA management. Nursing personnel should master characteristic TCM nursing techniques and flexibly apply the holistic perspective of syndrome differentiation and nursing to provide personalized, diversified, high-quality nursing services that improve quality of life for KOA patients.

Informed consent was obtained from the patient for this case report. No conflicts of interest exist in this article.

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