Post-Print: Pain Nursing Experience with Chinese-Western Integrative Medicine for a Case of Diabetic Foot Complicated with Erysipelas Under the Integrated Medical-Nursing Model

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Abstract

Objective: To explore the application of the physician-nurse integrated care model in integrative Chinese and Western medicine pain nursing for diabetic foot with erysipelas.

Methods: One patient with diabetic foot complicated by erysipelas was selected from our department, and the physician-nurse integrated care model was applied to provide integrative Chinese and Western medicine pain nursing.

Results: In this case, the physician-nurse integrated care model enabled collaboration between physicians and nurses. Based on the physician' s Traditional Chinese Medicine (TCM) syndrome differentiation, specialized guidance was provided to develop integrative Chinese and Western medicine nursing interventions for pain relief. During the treatment and nursing period, physicians and nurses jointly monitored the patient' s pain status, treatment, and nursing conditions, timely adjusted the treatment and nursing regimen, and provided comprehensive, holistic, and continuous care. This enabled the patient to alleviate pain, improve quality of life, and achieve maximal rehabilitation.

Conclusion: The application of the physician-nurse integrated care model provides patients with comprehensive, holistic, and continuous care, enabling them to alleviate pain, improve quality of life, and achieve maximal rehabilitation. This approach warrants clinical promotion and application.

Full Text

Preamble

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Title

Pain Nursing Experience of a Diabetic Foot Complicated with Erysipelas Using Integrated Chinese and Western Medicine Under the Guidance of an Integrated Medical-Nursing Model

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Abstract

Objective: To explore the application of an integrated medical-nursing model in pain management for diabetic foot complicated with erysipelas using integrated Chinese and Western medicine approaches.
Methods: We selected one patient with diabetic foot complicated by erysipelas from our department and implemented an integrated medical-nursing model for pain care combining Chinese and Western medicine modalities.
Results: Through the integrated medical-nursing model, physicians and nurses collaborated closely. Based on the physician' s Traditional Chinese Medicine (TCM) syndrome differentiation, nurses received specialized guidance to develop integrated nursing interventions for pain relief. During diagnosis, treatment, and nursing care, the medical-nursing team jointly monitored the patient' s pain status, treatment progress, and nursing outcomes, enabling timely adjustments to the care plan. This comprehensive, continuous, and holistic approach successfully alleviated the patient' s pain, improved quality of life, and maximized rehabilitation potential.
Conclusion: The integrated medical-nursing model provides patients with comprehensive, continuous, and holistic care that effectively reduces pain, enhances quality of life, and optimizes recovery. This approach merits clinical promotion and application.

Keywords: Diabetic foot; Erysipelas; Integrated medical-nursing care; Combination of Chinese and Western medicine; Pain

Introduction

Diabetic foot refers to foot infections, ulcer formation, and/or deep tissue destruction resulting from neuropathy and varying degrees of peripheral vascular disease in diabetic patients. In Traditional Chinese Medicine (TCM), this condition falls under the categories of "gangrene" or "tendon gangrene" [1]. Once lower limb infections, ulcers, or deep tissue necrosis develop, healing becomes extremely difficult, placing patients at significant risk of amputation and severely impacting their quality of life and prognosis [2].

Erysipelas is a surgical disease in TCM with documented descriptions in the *Huangdi Neijing* as "dan zhen" and "dan zao sores." The condition typically originates from skin or mucosal damage, where external fire-toxin combines with blood heat, accumulating in the skin and preventing proper discharge. This results in an acute infection characterized by bright red, burning lesions resembling cinnabar, equivalent to acute reticular lymphangitis in Western medicine [3]. Clinical manifestations include sharply demarcated localized redness, swelling, heat, and pain, often accompanied by lower limb lymphedema. Progressive edema can lead to abnormal limb appearance and pain, causing psychological and emotional changes that significantly impair patients' quality of life [4].

The integrated medical-nursing model involves physicians and nurses jointly managing patients and developing specific nursing interventions [5]. Research demonstrates that integrated medical-nursing ward rounds enhance communication between healthcare providers and enable collaborative assessment of patient progress and treatment effectiveness [6]. This report presents our experience with integrated Chinese-Western medicine pain nursing for a diabetic foot patient complicated by erysipelas under the guidance of an integrated medical-nursing model.

1. Clinical Case

The patient was a 69-year-old female with a three-year history of hyperglycemia. She presented with right foot redness, swelling, heat, and pain for two days, worsening for one day, and was admitted on July 7, 2022, with a diagnosis of gangrene (Type 2 diabetic foot) and chronic lymphangitis of both lower limbs. The patient walked into the outpatient department. Past medical history included depression for 15 years, diabetes mellitus for four years, and lacunar cerebral infarction for over four months.

Specialized examination revealed: bilateral lower limb hair loss, dark skin discoloration on both calves, swelling and dark redness of the right dorsal foot and gaiter region with slightly elevated skin temperature and local tenderness, and

dark redness in the left calf gaiter region with slightly elevated skin temperature. Both toes exhibited thin, shiny skin with thickened, deformed nails and darkened borders. Bilateral femoral, popliteal, and dorsalis pedis pulses were diminished, while posterior tibial pulses were non-palpable.

Due to the prolonged disease course with recurrent episodes requiring multiple hospitalizations, the patient experienced declining physical health, psychological distress, and reduced quality of life. We implemented an integrated medical-nursing model to facilitate communication, coordination, and shared decision-making, providing continuous medical services throughout the patient' s care journey [7].

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2. Integrated Nursing Methods

2.1 Integrated Medical-Nursing Care Model

2.1.1 Team Formation We established an integrated medical-nursing-patient team consisting of the patient' s attending physician and two primary nurses. The physician provided professional guidance on TCM syndrome differentiation, while physicians and nurses collaboratively collected patient data and developed individualized treatment and nursing plans. The team implemented an "on-duty for 8 hours, responsible for 24 hours" system [8].

2.1.2 Integrated Ward Rounds Our integrated ward rounds followed a structured protocol: First, during morning handover, nurses reported on the patient's treatment and nursing care. Second, night-shift nurses presented changes in condition, treatment completion status, catheter and skin care issues, and unresolved problems. The attending physician then provided supplementary information, and together they formulated the next steps in diagnosis, treatment, and nursing care. Finally, the attending physician proposed solutions to identified problems, collaborating with nurses to evaluate current treatment, nursing, and rehabilitation plans and recommend appropriate modifications.

2.2 Traditional Chinese Medicine Nursing Interventions

2.2.1 TCM Nursing Techniques Herbal Plaster Application: Peripheral vascular diseases in TCM belong to external medicine and primarily involve the spleen meridian. According to the circadian rhythm principles of the meridian system (midnight-noon ebb-flow theory), the spleen meridian dominates between 9:00 and 11:00 AM, during which the spleen governs transformation, transportation, and blood containment [9]. The stomach and spleen share an interior-exterior relationship, and Zusanli (ST36) is a crucial acupoint of the Stomach Meridian. Following the principle of local point selection, we applied herbal plaster to Zusanli to activate blood circulation, promote qi movement,

and unblock collaterals for pain relief. This intervention at ST36 yields particularly effective results [10].

Herbal Compress Therapy (Ta Zi): Herbal compress therapy is a distinctive TCM treatment characterized by simple operation, rapid onset, and clear efficacy, making it suitable for various painful conditions. "Ta" involves applying herbal solution-soaked gauze or towels to the affected area, while "Zi" involves immersing the area in herbal solution. These methods are often used together, hence the combined term "Ta Zi." The therapeutic mechanism involves reducing inflammation-induced heat sensations through conductive and radiant effects of wet compresses, thereby exerting anti-inflammatory, analgesic, antipruritic, and exudate-suppressing actions. This approach allows medicinal substances to penetrate muscles and hair follicles, reaching internal organs through meridian connections to affect the entire body. It also opens sweat pores to expel pathogenic factors, unblocks collaterals, regulates qi and blood, softens hardness, disperses nodules, and dispels wind to relieve itching. In this case, topical administration delivered medication directly to the lesion site, effectively reducing edema and pain [11].

2.2.2 TCM External Treatment For lymphedema, the disease location involves local collaterals (Luo Mai), requiring emphasis on local syndrome differentiation. The persistent and refractory nature of the condition stems from dampness and stasis in the collaterals, leaving no pathway for pathogenic factors to exit. Treatment must follow the natural tendency of the disease and provide an exit for pathogenic factors. The *Suwen* principle of "reducing the hard, eliminating the intrusive, dispersing the bound, and attacking the retained" provides the theoretical foundation for this therapy. The *Lingshu* states: "Skilled acupuncturists treat diseases like removing a thorn, cleaning a stain, untying a knot, or unblocking a dam," comparing diseases to thorns, stains, knots, and blockages—all representing pathogenic factors that must be expelled. Zhang Zhongjing noted: "Both acupuncture and herbs must precisely target the disease location, with medicinals directly counteracting the pathogenic factors to achieve cure," while Wu Jutong stated: "When expelling pathogenic factors, pursue them where they reside and expel them from the nearest location." These classical theories provide solid theoretical support for micro-needle collateral drainage therapy in treating secondary lymphedema. Considering that edematous diseases characteristically worsen in the evening, physicians administered acupuncture treatment at dusk, primarily selecting yin meridian points such as Diji (SP8), Yinlingquan (SP9), Lougu (SP7), and Sanyinjiao (SP6). The technique involves inserting needles into edematous areas to allow accumulated pathological fluids and stasis to drain from the needle holes, thereby reducing local fluid accumulation, alleviating clinical symptoms, and improving quality of life [12-13].

3. Patient Outcome

Following integrated Chinese-Western medicine pain nursing under the medical-nursing model, the patient' s disease course was significantly shortened and pain substantially reduced. At discharge, she exhibited only mild swelling and discomfort in both calves, could ambulate independently, and demonstrated marked improvement in bilateral lower limb pain. We instructed the patient to attend regular follow-ups, avoid wind-cold exposure, maintain proper daily routines, take medications regularly, monitor and control blood pressure and glucose levels, and practice proper foot protection.

Discussion

Diabetic complications predominantly affect the lower limbs, and the combination of diabetic foot with erysipelas creates a more complex clinical picture that causes significant patient suffering. Research indicates that successful implementation of clinical nursing pathways requires close cooperation between medical and nursing staff [14]. The integrated medical-nursing model is fundamentally patient-centered and strengthens collaborative efforts between physicians and nurses. Participation in this model helps healthcare providers follow and improve treatment protocols, promotes therapeutic efficacy, and enables selection of more effective nursing interventions beyond basic care [15].

In this case, the integrated medical-nursing model facilitated close collaboration between physicians and nurses. Based on TCM syndrome differentiation, physicians provided specialized guidance for developing integrated nursing measures to relieve pain. Throughout the diagnosis and treatment period, the team jointly monitored the patient' s pain, treatment progress, and nursing status, enabling timely adjustments to the care plan. This comprehensive, continuous, and holistic approach successfully reduced pain, improved quality of life, and maximized rehabilitation potential. This model warrants clinical promotion and application.

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Note: Figure translations are in progress. See original paper for figures.