Postprint of Nursing Experience with Integrated Traditional Chinese and Western Medicine in a Diabetic Patient with Right Foot Ulcer

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Abstract

This article summarizes the nursing experience of wound care for a patient with diabetic right foot ulcer. Based on syndrome differentiation, external traditional Chinese medicine therapies were administered at different stages to remove necrotic tissue and drain pus, promote tissue regeneration, and facilitate wound closure. Concurrently, grounded in evidence-based nursing, health education was strengthened and individualized nursing plans were formulated to accelerate the patient's wound healing.

Full Text

Nursing Experience of Integrated Traditional Chinese and Western Medicine for a Patient with Diabetic Foot Ulcer

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Abstract

This paper summarizes the nursing experience of integrated Traditional Chinese and Western medicine for a patient with diabetic foot ulcer on the right foot. According to different stages of wound healing, Traditional Chinese Medicine (TCM) external application therapy based on syndrome differentiation was implemented to enhance debridement, promote healthy tissue growth, and facilitate wound closure. Grounded in evidence-based nursing principles, individualized health education and nursing programs were developed to accelerate wound healing in the patient with diabetic foot ulcer.

Keywords: diabetic foot disease; Traditional Chinese Medicine external application; Chinese herbal medicine; evidence-based nursing; blood glucose

Introduction

Diabetic foot refers to lower limb infections, ulcer formation, and/or deep tissue destruction resulting from neuropathy and various degrees of peripheral vascular disease in diabetic patients, representing one of the most severe complications of diabetes. The Wagner classification system is typically used clinically to assess diabetic foot severity. Diabetic foot is associated with high rates of disability, mortality, and recurrence, along with substantial medical costs, creating significant burdens for families and society. Therefore, early screening and correction of risk factors, combined with timely and standardized treatment, can help reduce amputation rates and medical expenses while improving patients' quality of life.

TCM external therapy is a characteristic treatment modality in Chinese surgery. In clinical practice, ulcer wounds are evaluated and analyzed according to syndrome differentiation at different stages, with Chinese herbal medicines applied for symptomatic treatment. Drug-based external therapy constitutes an important component of TCM external treatment. This case report describes nursing interventions across different periods, including debridement and pus drainage, exudate management, heat-clearing and detoxification, protection of perilesional skin, and promotion of tissue regeneration and wound closure, integrated with evidence-based nursing and health education to improve patient compliance and achieve favorable outcomes.

Clinical Data

The patient was a male, [age] years old, with a body mass index (BMI) of [value] kg/cm^2. He presented with gangrene of the right little toe for [duration] months. Following toe amputation, a small wound appeared on the lateral aspect of the right foot dorsum [duration] months postoperatively. The patient did not seek medical attention, and the wound gradually expanded with purulent infection, causing unbearable pain that prompted his visit to our hospital.

Past medical history included cerebral infarction for [duration] years with residual right-sided motor impairment, hypertension for over [duration] years, and diabetes for over [duration] years. The patient was taking metformin for glycemic control but exhibited poor blood glucose control due to irregular medication adherence and poor compliance.

TCM diagnosis: Gangrene (damp-heat and toxin accumulation syndrome)
Western medicine diagnosis: 1. Diabetic foot, 2. Post-cerebral infarction sequelae period

At the initial visit, vital signs showed elevated blood pressure. Auxiliary examinations revealed: B-mode ultrasound demonstrated bilateral lower limb arterial occlusion with hypoperfusion changes. Ankle-brachial index (ABI) was [value] on the right side. Laboratory tests indicated: white blood cell count [value]$×10^{9}$/L, hemoglobin [value] g/L, neutrophils [value]%, C-reactive protein [value] mg/L. Fasting blood glucose was [value] mmol/L. Bacterial culture identified Gram-negative bacteria (positive).

The wound condition at initial assessment: wound tissue type was [percentage]% yellow, measuring [dimensions] cm, with large amounts of yellow purulent exudate and foul odor. The wound edges showed irregular maceration without undermining or sinus tracts. Perilesional skin exhibited redness, swelling, heat, and pain. Pain score on the Numeric Rating Scale (NRS) was [value].

Nursing Care

Nursing staff analyzed factors affecting wound healing in this patient, including diabetic foot infection, obesity, poor glycemic control, and poor patient compliance. Based on these factors, an individualized nursing plan was developed.

Nursing diagnoses: 1. Impaired skin integrity related to diabetic foot ulcer 2. Pain related to skin damage with infection 3. Deficient knowledge about diabetes leading to poor compliance

According to the patient's condition, wound care was divided into three stages:

Stage 1: Damp-heat and toxin accumulation syndrome—Debridement and pus drainage phase

During dressing changes, the TIME principle was followed. Wound debridement was performed first. After routine disinfection, surgical debridement was used to eliminate purulent fluid and necrotic tissue. Qufu (debridement) ointment was applied to the wound bed. This medication promotes qi and blood circulation, drains pus, and removes necrotic tissue for further gradual debridement. Guwei (surrounding) ointment was applied around the wound, which has heat-clearing, detoxifying, anti-inflammatory, and pain-relieving effects. Medical staff actively controlled inflammation with medications, covered the wound with sterile gauze to absorb exudate, and reduced infection risk.

[Figure 1: see original paper] Initial wound condition

Stage 2: Transition phase—Promoting new tissue growth

At this stage, the syndrome pattern was characterized as deficiency in the root and excess in the branches, with healthy qi deficiency and pathogenic qi attachment. Through local autolytic debridement, the old was replaced with the new, and wound circulation was good. Shengji (tissue regeneration) ointment was applied. This traditional Chinese medicine promotes tissue regeneration, reduces

swelling, relieves pain, and treats sores. It creates a favorable microenvironment for diabetic foot ulcers and increases granulation tissue quantity and collagen proportion.

On day [number], wound assessment showed: tissue type yellow <[percentage]%, moderate exudate [percentage]%, red tissue >[percentage]%. Light yellow exudate was present with reduced odor. Minimal maceration at wound edges, reduced swelling and slight redness in surrounding skin. Pain score NRS was [value].

[Figure 2: see original paper] After debridement and pus drainage

On day [number], assessment showed: perilesional skin color approaching normal, minimal exudate, wound edges rolling inward without maceration, tissue type red [percentage]%, no odor, pain score NRS [value]. Debridement was performed on the rolled edges.

[Figure 3: see original paper] After promoting new tissue growth

Stage 3: Deficiency of healthy qi—Tissue regeneration and wound closure phase

At this stage, the syndrome pattern was characterized as pathogenic factors eliminated but healthy qi deficient, with dual deficiency of qi and blood. Dressing frequency was reduced from [frequency] to [frequency] per week. Ulcer oil-soaked gauze was applied as a moist dressing. On day [number], perilesional skin color was normal and the wound had healed. See Figure [number].

[Figure 4: see original paper] Wound healed

Evidence-based nursing and health education:

Our hospital signed a cooperation agreement with the Registered Nurses' Association of Ontario (RNAO) in [month] [year], becoming the first Best Practice Spotlight Organization (BPSO) in China. An evidence-based team was established within the hospital, with all surgical outpatient nursing staff as members of the BPSO diabetic foot group. The team consisted of [number] nursing staff, including [number] deputy chief nurses and [number] charge nurses, comprising diabetes specialist nurses and wound, ostomy, and continence specialist nurses.

For this case, the evidence-based guideline "Assessment and Management of Patients with Diabetic Foot Ulcers" was applied for individualized nursing care.

Risk factor assessment: - Predisposing factors: diabetes and post-cerebral infarction sequelae with right-sided motor impairment, infection, etc. - Enabling factors: glycemic control, limb rehabilitation training, changing unhealthy lifestyle habits, attention to personal and environmental hygiene.

Interventions: Based on these factors, interventions were selected and implemented. Dietary guidance was provided, teaching the patient and family to estimate total food intake to enhance self-management of blood glucose. Family members recorded daily blood glucose values, and glycated hemoglobin was

monitored regularly to inform adjustments to hypoglycemic medications. Health education was reinforced.

For pain management, communication with the patient was conducted before each debridement and dressing change to gain cooperation and trust. During dressing changes, soothing music was played for relaxation therapy to distract attention. Gentle techniques were used during cleaning and debridement. Follow-up visits ensured timely dressing changes, improved patient compliance, strengthened management of underlying diseases, reinforced health education, and increased treatment confidence.

Discussion

This patient had diabetes and was in the post-cerebral infarction sequelae period, with poor glycemic control and poor compliance, which increased the difficulty of wound care. During wound treatment, nursing staff integrated Chinese and Western medicine nursing approaches, applying different TCM external therapies at different stages. Simultaneously, evidence-based team nursing staff applied evidence-based guidelines for assessment and intervention in health education, jointly developing and implementing targeted, individualized nursing care plans. This individualized approach improved patient compliance and facilitated wound healing. Individualized nursing protocols not only promote rapid recovery but also minimize economic costs and reduce the financial burden on patients, making this approach worthy of clinical application.

Conflict of Interest Statement: The authors declare no conflict of interest in this article.

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