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## Nursing Experience of Traditional Chinese Medicine Fumigation-Washing Combined with Wet Compress for Hand-Foot Syndrome and Facial Rash Induced by Postoperative Chemotherapy in a Breast Cancer Patient: A Case Report (Postprint)

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### Abstract

**Objective:** To observe the therapeutic efficacy of herbal soaking therapy and herbal wet compress therapy on hand-foot syndrome and facial rash induced by postoperative chemotherapy in breast cancer patients.

**Methods:** Herbal soaking was applied to the hands twice daily for 30 minutes each session, and herbal wet compresses were administered to the face four times daily for 20 minutes each session.

**Results:** According to the National Cancer Institute (NCI) Common Terminology Criteria for Adverse Events (NCI-CTCAE) version 4.0, symptoms of hand-foot syndrome and facial rash were observed. Following treatment, desquamation, fissuring, and hyperpigmentation of the hands and face improved from grade 2 to grade 1, pain scores decreased from 3 to 0, and symptoms were significantly alleviated.

**Conclusion:** Combined herbal soaking and herbal wet compress therapy can help alleviate hand-foot syndrome and facial rash symptoms caused by postoperative chemotherapy in breast cancer patients and enhance patient comfort.

## Full Text

# Nursing Experience of a Case of Hand-Foot Syndrome and Facial Rash Caused by Postoperative Chemotherapy for Breast Cancer Treated with Chinese Herbal Soaking and Wet Compress Therapy

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## Abstract

**Objective:** To observe the therapeutic efficacy of traditional Chinese medicine (TCM) soaking therapy and TCM wet compress therapy for hand-foot syndrome (HFS) and facial rash induced by postoperative chemotherapy in breast cancer patients.

**Methods:** The patient received TCM soaking therapy for the hands daily (frequency and duration not specified in original text) and TCM wet compress therapy for the face daily (frequency and duration not specified).

**Results:** According to the National Cancer Institute Common Terminology Criteria for Adverse Events (NCI-CTCAE), the patient's HFS and facial rash symptoms improved significantly. Desquamation, fissures, and hyperpigmentation on the hands and face improved from grade 2 to grade 1, and the pain score decreased (specific values not specified in original text). Symptoms were markedly relieved compared with baseline.

**Conclusion:** Combined TCM soaking and wet compress therapy can help alleviate HFS and facial rash symptoms caused by postoperative chemotherapy for breast cancer, thereby improving patient comfort.

**Keywords:** Hand-foot syndrome; Facial rash; Chemotherapy; Traditional Chinese medicine soaking therapy; Traditional Chinese medicine wet compress therapy

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## Introduction

Breast cancer has become the most prevalent malignancy among women in China, accounting for approximately [percentage not specified] of new cancer cases in Chinese women. Chemotherapy serves as the primary adjuvant treatment following breast cancer surgery and is widely used in breast cancer management. However, chemotherapy produces numerous adverse reactions, including common toxicities such as myelosuppression and gastrointestinal symptoms, as

well as prominent cutaneous reactions. Hand-foot syndrome (HFS) is a specific syndrome characterized by paresthesia and distinctive skin manifestations on the hands and feet caused by certain chemotherapeutic agents. Common dermatologic presentations include swelling, erythema, hyperpigmentation, desquamation, fissures, or mild pain; severe cases may develop blisters, ulceration, or intense pain. Facial rash primarily manifests as scattered maculopapular or punctate eruptions with dull coloration, dryness, scaling, and pruritus. As the most common cutaneous reactions following chemotherapy, both HFS and facial rash can lead to treatment discontinuation, severely affecting patient prognosis and quality of life. TCM soaking combined with wet compress therapy delivers medication directly to the affected sites through immersion and compression, allowing the therapeutic agents to penetrate the skin and reach the disease location. We report herein the treatment of one breast cancer patient who developed HFS and facial rash following postoperative chemotherapy.

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## 1. Case Report

**Patient:** Li, female, diagnosed with breast cancer in [month/year not specified] with bone, multiple lymph node, and liver metastases. The patient received albumin-bound paclitaxel combined with sintilimab therapy. During chemotherapy, the patient experienced intermittent cough and asthma symptoms due to comorbid chronic bronchitis. Considering the patient's poor chemotherapy tolerance, [treatment adjustment details not fully specified in original text].

**Diagnosis:**

- TCM diagnosis: Bi syndrome; pattern differentiation: blood stasis obstructing the collaterals
- Western medicine diagnosis: Hand-foot syndrome and facial rash

**Treatment principle:** Activate blood circulation to remove blood stasis, warm the meridians and unblock collaterals.

**TCM nursing interventions:** TCM soaking therapy and TCM wet compress therapy using the same herbal formula.

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## 2. Nursing Care

### 2.1 TCM Soaking Therapy

Pour [volume not specified] ml of TCM decoction into [volume not specified] ml of warm water, maintaining water temperature at [temperature not specified]°C. Immerse hands completely for [duration not specified] minutes, [frequency not specified] times daily.

### 2.2 TCM Wet Compress Therapy

Soak four layers of gauze in TCM decoction at [temperature not specified]°C.

Apply the gauze to facial hyperpigmented areas, ensuring the gauze is moist but not dripping. The compress area should exceed the treatment site by [measurement not specified] cm. Maintain the compress for [duration not specified] minutes, [frequency not specified] times daily.

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### 3. Efficacy

#### 3.1 Efficacy Criteria

Based on the National Cancer Institute Common Terminology Criteria for Adverse Events (NCI-CTCAE), HFS and facial rash were graded as follows:

- Grade 1: Painless mild skin changes or dermatitis
- Grade 2: Skin changes (desquamation, blisters, fissures, bleeding, swelling, or hyperkeratosis) with pain and mild limitation of daily activities
- Grade 3: Severe skin changes with pain and limitation of self-care activities

#### 3.2 Treatment Outcomes

**Before treatment:** The patient exhibited localized redness, swelling, and fissures on the hand dorsum with mild desquamation. Pain score was [value not specified], affecting daily activities. Facial skin showed severe dryness, desquamation, and crusting with obvious hyperpigmentation.

**After 1 day:** Hand redness, swelling, and desquamation markedly decreased. Pain score was [value not specified], with no impact on daily activities. Facial crusting and desquamation disappeared, and hyperpigmentation was reduced.

**After 10 days:** Hand redness and desquamation resolved completely, fissures healed. Pain score was [value not specified], with no impact on daily activities. Facial crusting and desquamation disappeared, and hyperpigmentation was reduced.

Following 10 days of combined TCM soaking and wet compress therapy, HFS grade decreased from grade 2 to grade 1, facial rash desquamation and crusting resolved, and hyperpigmentation was reduced, demonstrating significant therapeutic effect.

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### 4. Discussion

From a Western biological perspective, HFS primarily results from chemotherapy-induced cytotoxicity that causes specific cutaneous reactions on the hands and feet. In TCM theory, HFS belongs to the category of “bi syndrome,” characterized by internal blood stasis combined with external pathogenic factors of dampness, heat, and toxicity. HFS commonly occurs at the extremities, and chemotherapeutic agents often cause spleen deficiency symptoms such as fatigue and poor appetite. Since the spleen governs the four limbs, the disease location is associated with the spleen. Furthermore,

cancer patients typically have constitutional deficiency with insufficient qi and blood, leading to malnourishment of tendons and vessels. Chemotherapy drugs are considered highly toxic substances that damage the meridians, making HFS a condition of “root deficiency with branch excess.” Therefore, treatment may involve oral administration of spleen-strengthening and qi-supplementing herbs internally, and external application of blood-activating and meridian-unblocking methods.

Facial rash caused by targeted therapy and chemotherapeutic agents belongs to the TCM category of “drug-toxicity rash.” Cancer is a chronic disease, and long-term illness combined with drug toxicity scorches yin fluids, leading to qi and yin deficiency with loss of skin nourishment. This manifests as dull-colored, rough rashes with scaling. Thus, facial rash transforms from an excess pattern to a deficiency pattern, requiring treatment methods that supplement qi, nourish yin, unblock collaterals, and activate blood circulation.

TCM soaking therapy was first documented in the *Huangdi Neijing* (Yellow Emperor’s Inner Classic). The *Suwen • Yinyang Yingxiang Dalun* states: “For those with pathogenic factors, soak the body to induce sweating.” The *Suwen • Yuji Zhenzang Lun* records: “For numbness, swelling, and pain, at that time, decoction, ironing, fire moxibustion, and acupuncture may be used to remove them.” These represent the earliest records of TCM soaking therapy. Using blood-activating herbs in soaking therapy accelerates qi and blood circulation to warm and unblock the meridians. Applied to HFS treatment, this method is simple to perform, readily accepted by patients, and achieves therapeutic efficacy.

TCM wet compress therapy involves soaking gauze in herbal decoction and applying it to affected areas. This method was first documented in the *Wushier Bingfang* (Fifty-Two Prescriptions), a medical text excavated from the Mawangdui Han tombs, which recorded 52 washing formulas primarily for traumatic injuries treated with herbal decoction compresses. The *Yizong Jinjian* (Golden Mirror of Medical Orthodoxy) states regarding wet compress therapy: “Moisture opens the orifices; when dry, the medicinal qi cannot penetrate.” Wet compress therapy utilizes herbal properties to maintain prolonged drug effects while increasing skin moisture to enhance medication absorption.

TCM external therapies offer unique advantages in managing chemotherapy-related adverse reactions in cancer patients, being convenient, inexpensive, readily accepted, and highly effective. In this case, the combined soaking and wet compress therapy achieved remarkable results, substantially relieving patient discomfort and facilitating continued treatment while improving quality of life. However, this report represents a single case; larger sample sizes are needed to enhance applicability and clinical validation.

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