

Nursing Experience in Treating Psoriasis Vulgaris with Hemoperfusion Combined with Traditional Chinese Medicine Medicated Bath: A Case Report

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Abstract

This article summarizes nursing experience in treating psoriasis vulgaris with hemoperfusion combined with traditional Chinese medicine medicated baths. Based on hemoperfusion, patients received traditional Chinese medicine medicated baths along with dietary regulation, psychological nursing, and other measures. Post-intervention, patients exhibited no new skin rashes, with resolution of original plaques, disappearance of scaling and pruritus, and flattening of skin lesions.

Full Text

Nursing Experience in Hemoperfusion Combined with Chinese Herbal Bath Therapy for Plaque Psoriasis

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Abstract

This article summarizes nursing experience in treating plaque psoriasis with hemoperfusion combined with Chinese herbal bath therapy. Patients received Chinese herbal baths following hemoperfusion sessions, complemented by dietary adjustments and psychological care. Post-intervention outcomes included no new rash formation, resolution of existing plaques, disappearance of scales and pruritus, and flattening of skin lesions.

Keywords

Hemoperfusion, Chinese herbal bath, plaque psoriasis, nursing

Introduction

Psoriasis is a common chronic, relapsing, inflammatory skin disease characterized by well-demarcated red papules and plaques covered with silvery-white scales. Pathologically marked by excessive epidermal cell proliferation, keratinization, and inflammatory cell infiltration, this recalcitrant skin condition remains incompletely understood, with no fully satisfactory clinical treatment currently available. The incidence of psoriasis in China is 0.5% and shows an annual upward trend[1-2]. Clinical classifications include plaque psoriasis, pustular psoriasis, erythrodermic psoriasis, arthropathic psoriasis, and other variants, with plaque psoriasis accounting for 97% of cases[3]. This form typically manifests acutely as well-defined erythematous patches of varying sizes surrounded by inflammatory halos with slight infiltration and thickening. The surface is covered with multiple layers of silvery-white scales that are easily scraped off, revealing a translucent pink membrane (Auspitz sign) when removed. Lesions commonly occur on the scalp, sacral region, and extensor surfaces of the limbs, with some patients reporting varying degrees of pruritus. Psoriasis severely impacts patients' quality of life and physical-mental health, representing a major focus and challenge in dermatological research. Traditional Chinese medicine has achieved promising clinical results in treating psoriasis with herbal remedies[4-9]. Hemoperfusion (HP) is a therapeutic technique that circulates patient blood extracorporeally through a cartridge containing adsorbent materials (such as activated charcoal or resin) to remove metabolic products, toxic substances, and drugs via adsorption. The indications for hemoperfusion include psoriasis treatment[10]. This article reports the nursing experience of one plaque psoriasis patient treated with hemoperfusion combined with Chinese herbal bath therapy.

Clinical Case

The patient, Li, was an 18-year-old male, 185 cm tall and weighing 65 kg. A high school senior, he had a five-year history of plaque psoriasis with two previous recurrences. In January 2023, he experienced another recurrence and presented at our hospital. Traditional Chinese medicine examination revealed clear consciousness, fair spirit, normal complexion, but lackluster eyes and a slender build. His tongue was red with yellow coating, pulse was wiry, and he reported dry mouth, insomnia, and constipation. Skin lesions covered approximately 60% of body surface area, presenting as dark red macules of various forms with mild infiltration, minimal scaling, and severe pruritus that worsened at night but remained tolerable. The patient had no other diseases or complications, with normal liver and kidney function, coagulation profile, and complete blood count. He denied any major trauma history, transfusion history, or drug and food allergies.

TCM diagnosis: White crust wind (Baibi feng)

Western medicine diagnosis: Plaque psoriasis

Treatment Protocol

Hemoperfusion Treatment Following admission, the patient received hemoperfusion treatment every other day, three times weekly, for two hours per session. A Fresenius 4008s hemodialysis machine was used with a Yangquan HP-250 cartridge.

Pre-treatment preparation included: (1) Equipment preparation: hemoperfusion cartridge, tubing, 17G puncture needles, sterile drapes, normal saline, iodophor and cotton swabs for disinfection, tourniquet, and disposable gloves; (2) Device preparation: Fresenius 4008s hemodialysis machine; and (3) Cartridge heparinization: per physician orders, heparin was injected into the cartridge, mixed evenly, and left to stand for 20-30 minutes before use. This procedure was performed under strict aseptic technique in the treatment preparation room: A 5ml disposable syringe was used to draw up 12,500 units (100mg) of heparin injection; The protective cap on one side of the cartridge was removed and placed on a sterile drape; The heparin solution was injected directly into the cartridge's preservation fluid after removing the needle; The protective cap was retrieved from the drape and screwed back on tightly; The cartridge was inverted 180° and shaken approximately 10 times; and The cartridge was placed on a sterile drape to stand for 20-30 minutes before use.

Operational procedures comprised: (1) Machine self-check: verify power connection, turn on the main power switch, and complete all self-check procedures as required without simplification; (2) Cartridge and circuit installation: inspect for damage or compromised packaging, verify expiration date and model, and install components following aseptic principles and the extracorporeal blood flow direction; (3) Priming: connect the arterial line to normal saline, attach to the cartridge's arterial port while connecting the venous line to the venous port, then initiate the blood pump at 200-300ml/min with total priming volume of 2,000-3,000ml; (4) Extracorporeal circulation establishment: assess the patient's vascular access—the patient's antecubital veins were straight and prominent, suitable for puncture without immediate need for central venous catheterization. The procedure involved checking the access site for redness, bleeding, induration, and cleanliness while palpating vessel course; selecting puncture site and disinfecting skin with appropriate antiseptic; choosing puncture needles based on vessel size and flow requirements (17G for this patient); securing the needle after successful puncture; and administering initial anticoagulant per orders (unfractionated heparin at 35mg/kg bolus, with 10mg/h continuous infusion) to establish extracorporeal circulation; (5) Initiate blood pump at 50ml/min initially, then connect to the established vascular access when blood reaches the venous line end, gradually increasing pump speed to 100-130ml/min; (6) Post-initiation monitoring of blood pressure changes, allergic reactions, and machine alarms; and (7) Treatment termination and blood return. Finally, remove the

cartridge, tubing, and fluid bags per machine prompts, power off, disinfect and wipe the machine for future use.

After three hemoperfusion sessions, observable changes included lightening of erythema, significant reduction in lesion thickness and infiltration, and decreased scaling. The patient reported reduced systemic pruritus and improved sleep quality.

Chinese Herbal Bath Therapy Due to extensive skin involvement, the patient was prescribed Chinese herbal bath therapy as an external TCM treatment to consolidate therapeutic effects upon discharge. External TCM therapies offer minimal side effects, sustainable long-term use, and complementary benefits to Western medicine. As stated in the *Jin Gui Yao Lue*: “The interstitial spaces are where the triple burner connects with vital essence, where qi and blood infuse; the patterns are the textures of skin and viscera.” From the holistic perspective and viscera-channel theory of TCM, the body’s viscera and interstitial spaces are interconnected internally and externally. External treatments can penetrate through skin interstices and orifices to reach disease sites[11].

The herbal formula consisted of: Dictamni Cortex 100g, Chrysanthemi Indici Flos 100g, Arnebiae Radix 100g, Sophorae Flavescentis Radix 100g, Carthami Flos 60g, Platycladi Cacumen 100g, Perillae Folium 100g, and Natrii Sulfas 200g (the latter cannot be decocted but dissolved in boiling water and added directly to the bath). The decoction was prepared as an aqueous solution for bathing in a therapeutic tub at approximately 37°C for 20 minutes once daily. The herbal bath primarily functions to cool blood, activate blood circulation, and clear heat-dampness.

Outcome Observation

One-Month Follow-Up Following hemoperfusion treatment, [observation details were incomplete in the original].

Three-Month Follow-Up The patient returned to normal life, with resolution of original plaques, disappearance of scales and pruritus, and flattening of skin lesions.

Key Nursing Considerations

Disease observation involved monitoring skin lesions including area, erythema color, infiltration thickness, scaling, and pruritus; tracking vital signs such as temperature and blood pressure; observing for allergic reactions; and closely monitoring for bleeding points on skin and mucous membranes due to heparin use during hemoperfusion.

Dietary management was crucial as extensive scaling leads to protein loss, compounded by blood loss during hemoperfusion. Patients were encouraged

to consume high-protein, high-vitamin, low-fat, nutritious, and easily digestible foods, with increased intake of fresh vegetables, fruits, and water. Spicy and irritating foods, alcohol, tobacco, strong tea, coffee, and allergenic foods such as fish and shrimp were prohibited.

Skin care was emphasized to promote lesion healing and prevent infection and recurrence. Patients were instructed to maintain skin cleanliness through regular showers (preferably using shower rather than bath) with water temperature between 35-39°C, avoiding harsh detergents; wear cotton, loose, soft, and comfortable underwear; keep fingernails trimmed to prevent scratching; and protect damaged skin to avoid unnecessary infection.

Psychological care addressed the significant mental health impact of this chronic, refractory skin disease. Psoriasis severely affects quality of life, study, and work, often leading to psychological barriers, inferiority complexes, and depression. Therefore, enhanced communication, concern, understanding, and support were provided. Patient education about disease knowledge was delivered patiently, creating a relaxed environment conducive to mental health. Patients were encouraged to maintain positive attitudes and actively cooperate with treatment to accelerate recovery and improve quality of life.

Discharge Guidance

Upon discharge, patients received guidance on: (1) maintaining a reasonable diet by avoiding provoking foods (beef, mutton) and irritants (chili peppers); (2) strengthening exercise to improve immunity; (3) stress reduction; and (4) infection prevention.

Summary and Discussion

Clinical observation demonstrated that hemoperfusion combined with herbal bath therapy shortened treatment duration, reduced patient suffering, and achieved excellent efficacy with improved quality of life. Rational utilization of resin hemoperfusion may become a valuable therapeutic modality for psoriasis. However, as an invasive treatment, hemoperfusion carries certain risks and relatively high costs, requiring solid economic foundation and patient acceptance. Furthermore, questions regarding the optimal disease stage for initiating hemoperfusion plus herbal bath therapy require continued clinical practice, observation, and summarization.

References

- [1] Ding Xiaolan, Wang Tinglin, Shen Yiwei, et al. Epidemiological survey of psoriasis in six provinces and cities of China[J]. Chinese Journal of Dermatovenereology, 2010, 24(7):598-601.
- [2] Wang Xiaohui. Epidemiological investigation of psoriasis in four southwestern provinces and cities[J]. Harbin Medicine, 2017, 37(5):426-427.

- [3] Zhao Bian, ed. Clinical Dermatology[M]. 3rd ed. Nanjing: Science and Technology Press, 2001:759-762.
- [4] Li Tiantian, Wang Ping, Zhou Dongmei, et al. Clinical observation on the efficacy of Huoxue Jiedu Decoction (Blood-Activating Toxin-Removing Decoction) in treating psoriasis with blood stasis syndrome[J]. Journal of Practical Dermatology, 2016, 9(2):133-138.
- [5] Zhang Yubo, Liu Zhengu. Study on modified Qingzi Huaban Decoction (Cyan-Purple Macule-Transforming Decoction) for psoriasis[J]. Traditional Chinese Medicine, 2016, 16(9):170-173.
- [6] Chen Hu, Liu Shugang, An Kunjie. Effects of Keyin I Formula combined with narrow-band UVB on psoriasis vulgaris and its influence on oxidative stress and BDNF[J]. Chongqing Medicine, 2016, 45(12):2992-2994.
- [7] Zhao Huaibo, Wu Minfeng, Xu Rong, et al. Academic viewpoints and mechanism research on TCM treatment of psoriasis[J]. World Clinical Drugs, 2017, 38(3):145-148.
- [8] Luo Qin. Research overview of fire acupuncture combined with medication for psoriasis vulgaris[J]. Asia-Pacific Traditional Medicine, 2017, 13(7):63-66.
- [9] Wang Changyu, Liu Qi, Tian Shaowei. Evidence-based evaluation of clinical controlled studies on TCM or integrated TCM-Western medicine treatment of psoriasis[J]. Chinese Journal of Modern Drug Application, 2016, 13(10):273-274.
- [10] Chen Xiangmei. Standard Operating Procedures for Blood Purification: 2021 Edition[M]. Beijing: People's Military Medical Press, 2021:104-105.
- [11] Dai Luyi. Introduction to Ma Lili's experience in treating psoriasis vulgaris[J]. New Chinese Medicine, 2021, 53(18):204-207.

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