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Advances in Traditional Chinese Medicine Nursing for Gout (Postprint)

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Abstract

Gout is a disorder of purine metabolism for which no curative treatment currently exists. This article expounds upon the etiology, pathogenesis, and syndrome differentiation and classification of gout from the perspective of Traditional Chinese Medicine (TCM), and reviews TCM-characteristic nursing approaches including syndrome differentiation-based nursing care, dietary nursing, emotional nursing, complication nursing, and health education, aiming to prevent or reduce the recurrence of gout.

Full Text

Advances in Traditional Chinese Medicine Nursing for Gout

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Abstract

Gout is a purine metabolic disorder disease for which there is currently no radical cure. This article elaborates on the etiology, pathogenesis, and syndrome differentiation of gout from the perspective of Traditional Chinese Medicine (TCM), and reviews TCM-characteristic nursing approaches including syndrome-based nursing, dietary nursing, emotional nursing, complication nursing, and health education to prevent or reduce gout recurrence.

Keywords: Gout; Traditional Chinese Medicine nursing; Overview

In recent years, with socioeconomic development and improved living standards, national dietary purine and protein content has increased [1], leading to a rising incidence of gout in China with a trend toward younger onset. Western medicine defines gout, also known as “metabolic arthritis,” as a metabolic rheumatic disease caused by excessive uric acid production and/or reduced uric acid excretion, resulting in elevated serum uric acid levels. Supersaturated uric acid precipitates from blood or tissue fluid and deposits in local tissues, triggering aseptic inflammation and tissue damage. Clinical manifestations include hyperuricemia, acute arthritis, and tophaceous chronic arthritis, which severely impact patients’ quality of life [2].

In Traditional Chinese Medicine, gout belongs to the category of “bi syndrome” and is also known as “li jie” or “bai hu li jie” [3]. The disease is believed to result from overconsumption of rich, sweet foods that damage the spleen over time, overexertion, or exposure to wind-cold-damp-heat pathogens, leading to qi and blood stagnation, phlegm-stasis obstruction, and blocked qi and blood flow [4]. Western medicine primarily uses nonsteroidal anti-inflammatory drugs such as colchicine and glucocorticoids, which have significant side effects, prompting increasing interest in TCM treatment and nursing. Following the principle of “syndrome-based nursing with individualized approaches,” enhanced TCM nursing can improve therapeutic outcomes for gout patients. This article reviews recent research on TCM nursing interventions for gout patients.

1. TCM Etiology and Pathogenesis

Ancient TCM practitioners held various views on gout’s etiology. For instance, Zhang Zhongjing’s *Jin Gui Yao Lue* from the Han Dynasty states: “Li jie pain with inability to flex or extend is caused by drinking alcohol, sweating, and exposure to wind” [5]. The *Su Wen • Bi Lun* notes: “Wind, cold, and dampness arrive together to form bi syndrome” [6].

Contemporary TCM experts also express diverse perspectives. Zhang Zongli [7] believes gout results from “combined internal and external pathogenic factors,” including constitutional deficiency of vital qi plus external pathogen invasion of joints causing blockage and pain, as well as internal damage from seven emotions and improper diet—these three factors combine to cause the disease. Liu Lihua [8] considers gout to be primarily rooted in blood deficiency with wind-cold-dampness as external causes, where cold congeals meridians and causes blockage. Ni Qing et al. [9] propose that constitutional deficiency and improper diet constitute the common pathogenic basis, spleen-kidney deficiency with damp-heat generation represents an important pathogenic mechanism, and damp-heat-phlegm-turbidity-blood stasis obstructing collaterals is the key pathological link. The disease location is in the kidney and closely related to the liver and spleen. Sun Weiluo et al. [10] indicate that this disease manifests as root deficiency with branch excess, where the root involves liver-kidney deficiency and spleen

dysfunction, while the branch involves wind-cold-damp-heat, phlegm-turbidity, and blood stasis intermingling and obstructing blood vessels. In summary, gout requires comprehensive understanding of its complex pathogenesis.

Therapeutic physical exercise such as tai chi should be encouraged. Daily nursing actions should be gentle to reduce patient pain. Provide life care assistance, help patients turn in bed, and maintain clean bedding and clothing. Instruct patients to wear loose, soft shoes, avoiding footwear that is too small, tight, or hard to prevent foot injury.

3.1.2 Dietary Nursing

A reasonable diet is crucial for controlling gout and preventing complications. Pu Muying et al. [18] suggest that gout patients should consume low-protein, low-fat, low-sugar, and low-purine fruits, vegetables, and alkaline foods while avoiding excessive calorie intake. Chen Shijun [19] recommends a low-purine diet with purine intake <150 mg/day, total daily calories of 5460–6300 J, protein 60–65 g, fat 40–45 g, and carbohydrates 260–340 g. Dietary guidelines include: (1) Prohibit high-purine foods such as animal organs, fish roe, sardines, anchovies, spinach, mushrooms, yeast, beans, pigeon, and quail. (2) Ensure adequate fluid intake >2000–3000 mL daily; avoid purified water, but mineral water, milk, and juice are acceptable, as increased urine output prevents uric acid stone formation. An additional glass of water before bedtime or at night dilutes urine and prevents nocturnal concentration. (3) Consume carbohydrate-rich rice, steamed buns, and other grains; foods should be low in grease and salt (2–5 g daily). Obese patients should strictly limit long-term protein intake but may supplement with dairy products to maintain protein requirements. For gouty nephropathy patients, protein supplementation should be adjusted based on urinary protein loss and plasma protein levels. Patients with renal insufficiency and azotemia must strictly control protein intake. (4) Encourage alkaline fruits and vegetables such as citrus, sweet potatoes, and potatoes to dissolve deposited urate salts, reduce serum uric acid concentration, and alkalinize urine, thereby increasing uric acid solubility and excretion while correcting purine metabolism and providing abundant vitamins and minerals. (5) Avoid spicy and stimulating foods such as pepper, curry, mustard, ginger, and chili to prevent autonomic nervous system excitation that may trigger acute gout attacks. (6) Abstain from alcohol, particularly yellow rice wine and beer, as alcohol is a gout trigger.

3.1.3 Emotional Nursing

Gout is a lifelong disease without a radical cure. Patients often experience anxiety, depression, and loss of confidence in treatment due to recurrent attacks and severe acute pain, which affects recovery and reduces quality of life [20]. Zhang Fan et al. [21] investigated psychological health status in 216 gout patients using a self-designed questionnaire and the Kessler Psychological Distress Scale, finding varying psychological issues among patients. Therefore, nurses should provide timely, targeted psychological intervention, informing patients

that active and effective treatment enables normal life and work, thereby building confidence to overcome the disease. Nursing care should involve proactive concern with a kind, gentle attitude, using simple language to explain disease characteristics, treatment, and prognosis to stabilize patient emotions. Actively inquire about pain location and improvement, create a good rest environment, and encourage participation in recreational and social activities to stimulate social and family responsibilities. Correctly guide patients in external washing and application therapies according to medical orders, schedule medication administration appropriately, and perform nursing operations in a standardized, timely manner to eliminate adverse influences and maintain optimal psychological status for early recovery.

3.1.4 Complication Nursing

The most common complication of gout is local joint disease, primarily manifesting as gouty arthritis. Gout can also affect the kidneys, cardiovascular system, and endocrine system, making it a systemic disease where early diagnosis and treatment are crucial. Wang Mei et al. [22] suggest that for gout complications affecting finger and wrist joints, herbal external washing is effective, while large joint involvement responds well to herbal external application. Liu Dunyu et al. [23] propose that for wind-damp-heat bi-type gout with obvious joint swelling, magnesium sulfate wet compresses combined with acupuncture or bloodletting can dredge meridians and clear heat; for phlegm-stasis obstruction type, specific electromagnetic wave therapy, moxibustion, and external application can activate meridians, while muscle-relaxing and blood-activating washes can resolve stasis; for liver-spleen-kidney deficiency type, acupuncture, moxibustion, warm needling, or drug external application with local electromagnetic wave therapy is recommended. Kawai et al. [24] found that serum uric acid level is an independent risk factor for cardiovascular and cerebrovascular diseases in hypertensive patients. When blood uric acid exceeds 900 mol/L, urinary uric acid excretion surpasses its solubility, depositing in renal tubules and collecting ducts [25], where uric acid crystals cause kidney damage through crystal-mediated inflammatory reactions [26], potentially leading to renal failure. Therefore, hyperuricemia and gout patients should prevent cardiovascular, cerebrovascular, metabolic, and renal lesions—what TCM calls “preventing disease before onset and preventing progression after onset.”

3.2 Syndrome-Based Nursing

Gout’s pathogenesis varies across different developmental stages.

3.2.1 Damp-Heat Obstruction Type Clinical manifestations include red, swollen, hot, and painful joints with acute onset, affecting one or multiple joints, local burning sensation relieved by coolness, accompanied by thirst, restlessness, and short dark urine. The tongue is red with yellow greasy coating, and the pulse is wiry and slippery. Zhou Weiguo [27] believes that damp-heat obstruction

type gout results from constitutional deficiency, overconsumption of rich foods, or exposure to wind-cold-damp-heat pathogens due to improper living habits, leading to accumulated dampness transforming into heat and toxins, phlegm-stasis binding, qi-blood obstruction, blocked meridians, and joint involvement causing pain. Treatment should focus on clearing heat and toxins, resolving dampness and phlegm, cooling blood and reducing swelling, and unblocking collaterals to relieve pain, thus using Zhizi Jinhua Powder external application combined with low-dose oral colchicine, which has proven effective with few adverse reactions. Gu Jianwei [28] effectively improved joint swelling and pain symptoms, reduced serum uric acid concentration, and protected liver and kidney function to enhance quality of life through deficiency-tonifying, excess-draining, and blood-activating stasis-resolving methods. Liu Mengyuan [29], following TCM's principle of "treating the branch in acute conditions," focuses on clearing heat, resolving dampness, and expelling turbidity with spleen-strengthening assistance, using modified Simiao Powder to treat both acute gouty arthritis attacks and hyperuricemia with multi-target effects. Nursing care involves advising bed rest with appropriate limb elevation, taking herbal medicine after meals when slightly cooled. Diet should be light and easily digestible with abundant fruit, avoiding animal organs, bone marrow, seafood, chicken, alcohol, and spicy, greasy, sweet foods. Encourage water intake \$ 1500 mL daily to promote uric acid excretion, with *Imperata cylindrica* root decoction as tea substitute. For severe pain, apply swelling-reducing and pain-relieving plaster as prescribed, possibly with analgesic tablets, combined with acupuncture at Kunlun, Neiguan, Hegu, and Quchi points.

3.2.2 Wind-Cold-Dampness Bi Type Clinical manifestations include swollen and painful joints with limited flexion and extension, possible subcutaneous nodules or tophi, severe localized cold joint pain; when dampness predominates, joints feel heavy and painful with skin numbness, clear urine, and loose stools. The tongue is pale red with thin white or white greasy coating, and the pulse is wiry and tight or soft and slow. Wind-cold-dampness bi type gout results from insufficient vital qi allowing wind-cold-damp pathogens to invade and block meridians. Treatment focuses on dispelling wind-cold, eliminating dampness, and unblocking collaterals. Shen Weizeng [30] safely and effectively treats acute wind-cold-dampness bi type gouty arthritis by adding Xi Xian Cao, Sang Zhi, Huai Niu Xi, Tu Fu Ling, and Chuan Bei Xie to the classic Gui Zhi Shao Yao Zhi Mu Tang to enhance wind-dampness dispelling and tendon-relaxing effects. Nursing care involves advising consumption of ginger porridge, steamed lamb with angelica, more ginger and pepper, or medicinal wine as appropriate, while avoiding raw, cold, greasy, and sweet foods. Herbal medicine should be taken warm. Keep joints warm with protective covers if needed, maintain a warm, wind-protected room environment avoiding dampness, avoid outdoor activities in cold seasons or rainy damp weather, and encourage sun exposure. Observe pain location, nature, timing, and relationship to climate changes. For severe pain, apply swelling-reducing and

pain-relieving plaster as prescribed.

3.2.3 Phlegm-Stasis Obstruction Type Clinical manifestations include recurrent joint pain of long duration with fluctuating severity, local hard nodules or tophi, joint swelling, even ankylosis and deformity with limited flexion-extension, local dark-red skin color, physical weakness, and dark complexion. The tongue is deep red with petechiae and white greasy coating, and the pulse is wiry or thin and choppy. This gout type results from chronic disease with weak constitution, obstructed meridians, blocked qi-blood, and phlegm-stasis intermingling in joints. Turbidity, phlegm, and stasis represent the branch, while liver, spleen, and kidney dysfunction constitute the root [31]. Lei Yuanlin [32] considers some gout cases to involve spleen-kidney yang deficiency with phlegm-stasis coagulation, using the empirical formula Fengshi No. 2 to warm yang, benefit kidneys, dispel wind, activate blood, and unblock collaterals for pain relief. Treatment focuses on activating blood to resolve stasis and transforming phlegm to unblock collaterals. Nursing care advises avoiding overexertion and cold exposure, maintaining a warm room environment, keeping the affected limb warm (especially wearing long pants during sleep), consuming a light diet with vitamin-rich foods and blood-activating collateral-unblocking items like eggplant, cabbage, and red dates. Herbal medicine should be taken warm after meals, with close observation for drug reactions.

3.2.4 Spleen-Kidney Yang Deficiency Type Clinical manifestations include persistent joint swelling and pain with local joint deformity, worse at night than daytime, limb and facial edema, accompanied by shortness of breath, fatigue, sore and weak lower back and knees, cold intolerance, poor appetite, nausea, abdominal distension, and loose stools. The tongue is pale and swollen with thin white coating, and the pulse is wiry and thin. This gout type primarily results from constitutional yang deficiency with external pathogen invasion that damages the spleen and kidneys due to prolonged illness. Wei Wenzhe [33] believes that insufficient spleen-kidney yang qi with damp-phlegm-turbidity stagnation constitutes the basic pathogenesis of gout, and treatment should focus on unblocking bi and dispelling stasis while strengthening the spleen and tonifying kidneys, using formulas like Si Ni Tang, Ma Huang Fu Zi Xi Xin Tang, and Huo Luo Xiao Ling Dan with good clinical results. Nursing care includes a light diet with vitamin-rich foods and fruits such as cabbage, red dates, apples, goji berries, coix seed, and milk. Keep the affected limb warm with appropriate massage to prevent muscle spasms, emphasize basic nursing care and health education, and scientifically guide patients in limb functional exercises.

3.2.5 Liver-Kidney Yin Deficiency Type Clinical manifestations include recurrent joint pain of long duration with fluctuating severity or wandering pain, even joint deformity with visible nodules, limited flexion-extension, sore lower back and knees or heel pain, skin numbness, fatigue, tinnitus, dry mouth, palpitations, shortness of breath, deep thin wiry pulse, dry red tongue with

thin yellow dry coating. Treatment focuses on tonifying qi-blood, regulating and supplementing liver-kidney, dispelling wind-dampness, and activating collaterals to relieve pain. During acute phases, San Miao Wan is used as the base formula with Tu Fu Ling, Shan Ci Gu, and Fen Bi Xie; during stable phases, Shen Qi Wan is the base with added goji berries and Euryale ferox seeds. For gouty nephropathy, particular emphasis on dispelling dampness, activating blood, and benefiting kidneys yields excellent results. Diet should include liver-kidney tonifying foods such as black sesame, goji berries, milk, pork tendons, and cattle/sheep spinal cord. Instruct patients to change positions frequently, maintain functional joint positions, and encourage appropriate exercise or joint movement.

3.3.1 Daily Living

Guide patients to maintain a warm, ventilated living environment, avoiding cold and dampness. Life should be regular with adequate sleep and balanced work-rest, as excessive labor can trigger acute gout attacks.

3.3.2 Weight Control

Weight control is crucial for gout patients, with BMI ideally maintained at 18.5–25. Obese patients should control total calories and limit high-fat intake, using weight-reduction diets with 10–15% lower daily energy intake than normal. However, weight loss should not be rushed, as rapid fat and tissue breakdown releases large amounts of purines that can trigger acute gout attacks.

3.3.3 Physical Exercise

During acute gout phases, patients with red, swollen, hot, painful joints often have fever and should maintain absolute bed rest with elevated limbs, avoiding weight-bearing on affected joints. Activity can resume 72 hours after pain relief, starting with light activity and gradually increasing as strength improves—progress should be gradual and consistent. Excessive activity should be avoided as overexertion increases lactic acid, which inhibits renal uric acid excretion, elevates serum uric acid, and may trigger gouty arthritis attacks.

3.3.4 Disease Self-Awareness

This disease predominantly occurs in middle-aged and elderly men (95%) and postmenopausal women (5%), and is the most common arthritis in men over 40 [34]. Guide patients in joint protection: use shoulders instead of hands for weight-bearing, use arms instead of fingers, avoid prolonged heavy physical labor, change positions frequently, and keep affected joints comfortable. Avoid activity during local fever and swelling. Protect the feet (lower limb joints, especially toes, bear maximum pressure, are prone to injury, and have lower local temperature, making them common sites for gouty arthritis). Wash feet

daily with warm water and keep skin dry after washing. Patients with recurrent attacks should learn self-examination by palpating ear and extremity joint cartilage for tophi. Regularly monitor serum uric acid and attend outpatient follow-ups.

Conclusion

Gout is a chronic recurrent metabolic disorder. TCM believes the disease primarily involves organ pathology, particularly spleen, liver, and kidney dysfunction, leading to accumulation of damp-turbidity, phlegm-fluid, and blood stasis in limb joints and tendons. Therefore, we apply TCM's "holistic concept" and "yin-yang principles" to comprehensively understand disease development, treating the person as an organic whole. Based on each gout type's pathogenic characteristics, we provide symptomatic treatment and holistic care through syndrome-based nursing, diet, emotional support, health education, and other aspects to quickly relieve suffering, achieve effective treatment goals, and improve quality of life.

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