

Integrated Traditional Chinese and Western Medicine Nursing for an Elderly Patient with Alzheimer' s Disease Undergoing Total Hip Arthroplasty

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Abstract

With the intensification of population aging, the incidence of femoral neck fractures in older adults continues to rise. Very elderly patients often have poor vascular conditions and a hypercoagulable state. When complicated by Alzheimer's disease, cognitive decline, emotional agitation, and poor compliance, combined with the dual surgical trauma of inferior vena cava filter implantation and total hip arthroplasty, significantly increase the risk of perioperative complications and the difficulty of nursing care. This paper reports the case of an 84-year-old patient with a right femoral neck fracture complicated by Alzheimer's disease and lower-extremity deep vein thrombosis, who successively underwent inferior vena cava filter implantation and total hip arthroplasty and received perioperative integrated traditional Chinese and Western medicine nursing care. Western medical nursing included condition monitoring, specialized observation of the filter, position management, analgesia and anticoagulation, complication prevention, and rehabilitation guidance. Traditional Chinese medicine syndrome differentiation identified liver-kidney deficiency, qi deficiency with blood stasis, and phlegm-stasis obstructing the orifices; interventions included oral Chinese herbal medicine, acupoint massage, moxibustion, Chinese herbal fumigation and washing, and emotional care. Results: Both surgical incisions healed by primary intention, and no serious complications such as filter displacement, pulmonary embolism, joint dislocation, or pressure ulcers occurred. The MMSE score increased from 11 to 17 points, agitation and insomnia improved markedly, and the patient was able to walk with the aid of a walker and was discharged after rehabilitation. Conclusion: For very elderly patients with Alzheimer's disease undergoing combined surgical procedures, integrated traditional Chinese and Western medicine nursing can address both the root and manifestations of the condition, reduce high-risk perioperative complications, improve mental and emotional status, promote recovery of limb function, and provide a clinical nursing reference for similar cases.

Full Text

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Abstract: With the aggravation of population aging, the incidence of femoral

neck fractures in older adults continues to rise. Elderly patients often have poor vascular conditions and a hypercoagulable state of the blood. When complicated by Alzheimer's disease, cognitive decline, emotional agitation, and poor compliance further occur. In addition, the dual surgical trauma of inferior vena cava filter implantation and total hip arthroplasty significantly increases the risk of perioperative complications and creates great difficulty in nursing care. This article reports one case of an 84-year-old patient with a right femoral neck fracture complicated by Alzheimer's disease and deep venous thrombosis of the lower limb, who successively underwent inferior vena cava filter implantation and total hip arthroplasty. Integrated traditional Chinese and Western medicine nursing was implemented throughout the perioperative period. Western-medicine nursing included condition monitoring, special observation of the filter, position management, analgesia and anticoagulation, prevention of complications, and rehabilitation guidance. Based on traditional Chinese medicine syndrome differentiation, the patient was diagnosed with liver-kidney deficiency, qi deficiency with blood stasis, and phlegm-stasis obstructing the orifices; traditional Chinese medicine interventions included oral Chinese herbal medicine, acupoint massage, moxibustion, Chinese herbal fumigation and washing, and emotional care. **Results:** Both surgical incisions healed by first intention; no serious complications such as filter displacement, pulmonary embolism, joint dislocation, or pressure injury occurred. The MMSE score increased from 11 to 17, agitation and insomnia improved markedly, and the patient was able to walk with the assistance of a walker and was discharged after rehabilitation. **Conclusion:** For elderly patients with Alzheimer's disease undergoing complex surgery, integrated traditional Chinese and Western medicine nursing can address both the symptoms and the underlying condition, reduce high-risk perioperative complications, improve mental status, promote recovery of limb function, and provide a clinical nursing reference for similar cases.

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Abstract: With the aggravation of population aging, the incidence of femoral neck fracture in elderly patients continues to rise. Advanced-age patients often present with poor vascular conditions and hypercoagulable state of blood. When complicated with Alzheimer's disease, patients suffer from cognitive decline,

emotional restlessness and poor treatment compliance. Combined with dual surgical trauma of inferior vena cava filter implantation and total hip arthroplasty, the risk of perioperative complications increases significantly, bringing great challenges to clinical nursing. This paper reported a case of 84-year-old patient with right femoral neck fracture complicated with Alzheimer's disease and deep venous thrombosis of lower extremity, who underwent inferior vena cava filter implantation followed by total hip arthroplasty. Integrated traditional Chinese and western medicine nursing was implemented during perioperative period. Western-medicine nursing included condition monitoring, special observation of filter, position management, analgesia and anticoagulation, complication prevention and rehabilitation guidance. According to TCM syndrome differentiation, the patient was diagnosed as liver-kidney deficiency, qi-blood stasis and phlegm-stasis obstructing orifices. TCM interventions contained oral Chinese herbal medicine,

acupoint massage, moxibustion, Chinese herbal fumigation and washing, as well as emotional nursing. **Results:** Both surgical incisions achieved grade-A healing. No severe complications such as filter displacement, pulmonary embolism, hip dislocation and pressure injury occurred. The MMSE score increased from 11 to 17 points. Symptoms of restlessness and insomnia were obviously relieved. The patient could walk slowly with the aid of walker and was discharged smoothly. **Conclusion:** Integrated traditional Chinese and western medicine nursing for advanced-age patients with Alzheimer's disease receiving combined surgery can treat both manifestation and root cause, reduce perioperative high-risk complications, improve mental and emotional status, and promote the recovery of limb function. It can provide clinical nursing reference for similar cases.

Key words: advanced-age; Alzheimer's disease; total hip arthroplasty; inferior vena cava filter; integrated traditional Chinese and western medicine nursing; case report

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Introduction

As the aging of China's population continues to accelerate, osteoporotic femoral neck fracture has become a common serious injury among older adults, with relatively high risks of disability and death. Total hip arthroplasty is an important means of reconstructing hip-joint function. However, very old patients often have concomitant vascular sclerosis and hypercoagulability. Prolonged bed rest after fracture can readily induce deep venous thrombosis of the lower limbs, and thrombus shedding may cause fatal pulmonary embolism. In clinical practice, inferior vena cava filter implantation is often performed first in high-risk patients to safeguard joint replacement surgery.

Patients with Alzheimer' s disease have impaired memory and orientation, are prone to agitation, and often present postoperatively with restless movement and delirious speech. They cannot cooperate with positioning and rehabilitation training, which markedly increases the risk of concurrent complications such as joint dislocation, filter displacement, hypostatic pneumonia, and pressure injury, bringing major challenges to clinical nursing. Modern Western-medicine nursing emphasizes vital-sign monitoring, anticoagulation management, positioning restraint, and prevention and control of complications; it can address issues at the physical level, but has limited effect in improving patients' psychomotor agitation, internal deficiency of the zang-fu organs, and qi-blood stagnation. Traditional Chinese medicine, with holistic concepts and syndrome differentiation as its core, carries out syndrome-based care centered on "dementia" and "fracture disease." Through Chinese medication, external treatment, and emotional nursing, it supports healthy qi and consolidates the root, benefits qi and activates blood, awakens the brain and calms the spirit, thereby compensating for the shortcomings of Western-medicine nursing alone. The integrated traditional Chinese and Western medicine nursing case of this advanced-age patient with Alzheimer' s disease undergoing two operations is reported as follows, to provide a reference for clinical nursing practice.

1 Case Data

1.1 General Data

The patient, female, 84 years old, was admitted because of swelling and pain of the right hip joint with limited movement for 6 days after a fall. Admission diagnoses: right femoral neck fracture; deep venous thrombosis of the right lower limb; Alzheimer' s disease (moderate); depressive state; hypertension. She had a 7-year history of Alzheimer' s disease, with memory decline and impaired orientation, restless wandering at night, and a history of depressive state for many years, with poor emotional self-control.

Physical examination on admission: T 36.1°C, P 56 beats/min, R 16 breaths/min, BP 160/85 mmHg. The right hip was swollen and held in flexion and shortening deformity, with normal skin temperature and color. There was tenderness in the right inguinal region, lateral hip percussion pain, and positive longitudinal percussion pain of the femur. Flexion and extension of the right hip joint were limited, with extension 0° and flexion 0°. VAS pain score was 7 points. Color Doppler ultrasonography of the lower-limb vessels suggested deep venous thrombosis of the right lower limb, with markedly elevated D-dimer and high risk of pulmonary embolism. On the 3rd day after admission, inferior vena cava filter implantation was performed, and the operation was successful. On admission

On day 4, the patient underwent artificial total hip arthroplasty. After surgery, the patient was restless, refused treatment, and presented with incisional pain, swelling of the right lower limb, abdominal distension and urinary retention, and

sleep disturbance; individualized integrated traditional Chinese and Western medical nursing interventions were provided.

1.2 Nursing Assessment

1.2.1 Western Medical Assessment

Cognition and mental status: MMSE score 11 points, indicating moderate cognitive impairment; consciousness was clouded, the patient was easily irritated, and there were high risks such as self-removal of tubes and unauthorized position changes. Somatic status: vital signs were stable after the two operations; there was pain at the hip incision and swelling of the right lower limb; an inferior vena cava filter had been placed in the body, with risks of filter displacement, obstruction, and secondary thrombosis; prolonged bed rest created high risks of joint dislocation, pulmonary embolism, and pressure injury. General condition: advanced age and frailty, poor nutritional status, decreased immunity, and a hypercoagulable state of the blood.

1.2.2 Traditional Chinese Medicine Assessment

The patient was elderly and frail, with deficiency of the liver and kidney and insufficiency of qi and blood; superimposed fracture, dual surgical trauma, internal stagnation of blood stasis, stagnation of qi and blood stasis, and obstruction of the channels and collaterals. The dementia belonged to the traditional Chinese medicine category of “dementia,” and pattern differentiation indicated liver-kidney yin deficiency and obstruction by phlegm and blood stasis; restlessness and insomnia were due to malnourishment of the heart spirit and deficiency vexation with unrest; lower-limb swelling was due to stagnation of blood stasis in the vessels; abdominal distension and urinary retention were due to spleen-stomach weakness and qi dynamic obstruction. The tongue was dark purple, with a thin greasy coating, and the pulse was thready and rough.

2 Nursing Diagnosis

Acute pain: related to hip joint surgery wounds and meridian obstruction;

Cognitive impairment: related to neurodegenerative changes in the brain caused by Alzheimer’s disease;

Risk of thrombus formation and embolism: related to prolonged bed rest, hypercoagulability, and vascular injury;

Risk of falls and joint dislocation: related to cognitive impairment and abnormal limb movement;

Disturbed sleep pattern: related to postoperative pain, dementia-related restlessness, and malnourishment of the heart spirit;

Potential complications: filter displacement, pulmonary embolism, pressure injury, and incisional infection.

3 Integrated Traditional Chinese and Western Medical Nursing Measures

3.1 Western Medical Nursing

3.1.1 Condition Monitoring and Specialized Filter Care

Vital signs, respiration, and oxygen saturation were closely monitored, with vigilance for the occurrence of pulmonary embolism. The puncture site of the femoral-groin filter was observed for bleeding or hematoma; bilateral lower-limb skin temperature, color, swelling, and dorsalis pedis artery pulsation were compared. The urinary catheter was properly secured. The limbs were protected with soft restraints, padding was placed at the restraint sites, and the restraints were loosened regularly for massage to prevent restlessness, tube removal, and large-amplitude twisting from inducing filter displacement.

3.1.2 Positioning Care

After total hip arthroplasty, the affected limb was maintained in an abducted neutral position, with a soft pillow placed between the legs. Crossing the legs, adduction, and hip flexion greater than 90° were prohibited to prevent joint dislocation. After filter implantation, the lower limb on the puncture side was kept straight and immobilized for 6 hours to avoid compressing the punctured vessel. Axial turning was performed every 2 hours, with gentle and slow movements, protecting pressure-bearing areas to prevent pressure injury.

3.1.3 Pain and Anticoagulation Care

The VAS score was dynamically assessed, multimodal analgesia was implemented, and restlessness induced by pain was reduced. Low-molecular-weight heparin anticoagulation was administered as prescribed. Bleeding signs such as gingival bleeding, subcutaneous ecchymosis, and melena were closely observed, and the risks of anticoagulation and bleeding were balanced.

3.1.4 Cognitive and Behavioral Care

Family members accompanied the patient 24 hours a day, and soft lighting was maintained in the ward to reduce sound and light stimulation. Nursing communication used brief, repetitive language; soothing music was played; rough pressure restraint was avoided; and the occurrence of restlessness was reduced.

3.1.5 Prevention and Nursing of Complications

Medical elastic stockings were worn, and ankle-pump exercises and prolonged contraction training of the quadriceps femoris were instructed. Hot compresses

and kneading or patting of the affected limb were strictly prohibited to avoid thrombus dislodgement. Back patting for expectoration was performed regularly to prevent hypostatic pneumonia; the bed unit was kept flat and dry to prevent pressure injury.

3.1.6 Dietary Care

A high-protein, high-calcium, low-fat, low-salt, light, and easily digestible diet was provided. The patient was encouraged to drink more water and eat small, frequent meals to reduce blood viscosity and lessen the gastrointestinal burden.

3.2 Traditional Chinese Medicine Syndrome-Differentiated Nursing

3.2.1 Oral Chinese Herbal Medicine

Treatment was aimed at replenishing qi and activating blood, resolving stasis and unblocking the vessels, awakening the brain and calming the spirit. Yangyin Huanwu Decoction combined with Tianma Gouteng Decoction was administered with modifications. Prescription: astragalus, angelica, Ligusticum chuanxiong, rehmannia, Acorus tatarinowii, polygala, gastrodia, Poria, and earthworm. One dose daily; decocted in water to obtain 200 mL of juice, taken warm in the morning and evening, to improve postoperative blood-stasis swelling and alleviate symptoms of dementia-related restlessness.

3.2.2 Acupoint Massage

Baihui, Sishencong, Shenmen, Neiguan, Anshen Dingzhi, and Gai Shan Renzhi; Zusanli and Zhongwan to strengthen the spleen and reduce distension; Xuehai, Yanglingquan, and Sanyinjiao to dredge the meridians and collaterals and reduce swelling. Each session lasted 3 min, with gentle pressure, adjusted to the patient's tolerance, once daily.

3.2.3 Moxibustion

After postoperative anal exhaust, qi hai, Guanyuan, and Zusanli were selected for warming moxibustion, 15 min each time, to warm yang and replenish qi, strengthen the spleen and consolidate the root, improve qi and blood deficiency in elderly patients, and enhance the body's ability to recover. The entire moxibustion process was monitored to prevent burns.

3.2.4 Chinese Herbal Fumigation and Washing

One week after surgery, after confirming that the incision had healed well, a decoction of safflower, mugwort leaf, Lycopus lucidus, Pyrola, and Achyranthes bidentata was used to fumigate and wash the affected limb. The temperature of the medicinal liquid was 40–45 °C, once daily, 20 min each time, to invigorate

blood and resolve stasis, relax the tendons and unblock the collaterals, and reduce swelling and stiffness of the lower limb.

3.2.5 Emotional-Nursing Care

According to the theory of emotion regulation in traditional Chinese medicine, nurses maintained a warm attitude, patiently provided reassurance, played soothing music, soothed the liver and calmed the mind, reduced agitation and crying, and improved treatment adherence.

3.3 Rehabilitation Nursing

Following the traditional Chinese medicine principle of “combining movement and stillness,” rehabilitation training was carried out in stages. In the early postoperative period, long contractions of the gastrocnemius and quadriceps femoris were performed, and large-amplitude lower-limb activity was prohibited. In the middle stage, passive flexion and extension of the hip joint were performed under medical and nursing supervision. In the later stage, the patient stood with the aid of an assistive device and walked slowly. Training was advanced step by step, harmonizing qi and blood, preventing recurrence of blood stasis, and avoiding the risks of dislocation and falls.

3.4 Discharge Guidance

Western medicine: Follow the physician’s instructions for long-term anticoagulation and blood-pressure control; prohibit crossing the legs, deep squatting, and excessive hip flexion; avoid pressure and weight-bearing on the lower limbs; regularly recheck the filter, perform color Doppler ultrasonography of the lower-limb vessels and hip-joint imaging, and seek medical attention promptly if discomfort occurs.

Traditional Chinese medicine: The diet should include products that tonify and benefit the liver and kidney and supplement qi and invigorate blood, such as Chinese yam, wolfberry, red dates, and black fungus; avoid raw, cold, oily, and greasy foods. At home, continue simple acupoint massage to regulate and smooth the emotions and delay decline in cognitive function.

4 Nursing Outcomes

The patient was hospitalized for 22 days. The hip incision and the filter puncture incision both healed by first intention. During hospitalization, no complications occurred, such as filter displacement, pulmonary embolism, joint dislocation, or pressure injury, and the swelling of the right lower limb subsided. The patient’s agitation and crying were markedly reduced, sleep improved, and the MMSE score increased from 11 to 17. Pain was significantly relieved, the patient could walk slowly with the aid of an assistive device, diet and defecation were normal,

qi and blood were regulated and harmonized, and the patient was discharged after rehabilitation.

5 Nursing Summary

Elderly patients with Alzheimer' s disease undergoing inferior vena cava filter implantation combined with total hip arthroplasty are undergoing high-risk complex surgery. The operation causes major trauma and carries a high risk of thrombosis; cognitive impairment leads to poor compliance, and the nursing challenges are prominent. Western medical nursing focuses on filter monitoring, anticoagulation management, position control, and prevention and control of complications to ensure perioperative limb safety. Traditional Chinese medicine emphasizes holistic syndrome differentiation and adopts oral Chinese herbal medicine, acupoint massage, moxibustion, fumigation and washing, and emotional nursing to replenish qi and invigorate blood, tonify and benefit the liver and kidney, awaken the brain and calm the spirit, and improve the patient' s agitation and insomnia as well as qi deficiency and blood stasis. Integrated traditional Chinese and Western nursing addresses the limitations of Western medical nursing and can effectively reduce high-risk complications, improve patient cooperation, and promote wound healing and limb-function recovery; it has good clinical application value for such special elderly surgical patients.

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