

## Nursing Case Analysis of Moxibustion Treatment for an Elderly Female Patient with Uremia and Sleep Disorder

**Authors:**

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### Abstract

**Objective** To investigate the intervention effect of moxibustion therapy on sleep disturbances in elderly uremic patients undergoing hemodialysis and to identify key nursing considerations. **Methods** In a 67-year-old patient with stage 5D chronic kidney disease complicated by refractory insomnia, moxibustion treatment was administered based on the individual's specific condition while maintaining the regular dialysis regimen. Acupoint moxibustion was performed every other day for 4 consecutive weeks. The Pittsburgh Sleep Quality Index (PSQI) was employed to assess sleep quality improvements before and after treatment. **Results** Following treatment, the patient's total PSQI score decreased from 15 to 5 points, demonstrating a significant enhancement in sleep quality. Sleep onset latency was reduced from >60 minutes to <20 minutes, nocturnal sleep duration extended to 6 hours, and the frequency of nocturnal awakenings markedly decreased. Concurrently, concomitant symptoms including poor appetite and lower extremity edema also improved. **Conclusion** Moxibustion can modulate spleen and kidney function, improve systemic microcirculation, and balance Yin-Yang in elderly uremic hemodialysis patients. The thermal stimulation of acupoints promotes Qi and blood circulation, significantly alleviating insomnia symptoms. This intervention is characterized by operational safety and high patient compliance, warranting broader clinical application.

### Full Text

#### A Case Study of Moxibustion Therapy and Nursing Care for an Elderly Female Patient with Uremia and Sleep Disorders

Zhang Yueping  
Nankou Hospital, Changping District, Beijing

## Abstract

**Objective:** To explore the intervention effects of moxibustion therapy on sleep disorders in elderly patients with uremia undergoing hemodialysis, as well as key nursing considerations. **Methods:** A 67-year-old patient with chronic kidney disease stage 5D and refractory insomnia was treated with moxibustion at specific acupoints every other day for 4 weeks, while maintaining her hemodialysis regimen. The patient's sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI) before and after treatment. **Results:** After treatment, the patient's PSQI total score decreased from 15 to 5, indicating a significant improvement in sleep quality. Her sleep latency was reduced from over 60 minutes to less than 20 minutes, nighttime sleep duration increased to 6 hours, and the frequency of awakenings decreased significantly. Additionally, accompanying symptoms such as poor appetite and lower limb edema improved synchronously. **Conclusion:** Moxibustion can regulate spleen and kidney functions in elderly patients with uremia undergoing hemodialysis, improve microcirculation, and balance yin and yang. The warming stimulation of acupoints promotes qi and blood circulation, effectively alleviating insomnia symptoms. Moxibustion is safe and well-tolerated, making it worthy of clinical promotion.

**Keywords:** Uremia; Sleep Disorders; Moxibustion; Yin-Yang Deficiency Syndrome; Case Nursing

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Uremia represents the terminal stage of chronic kidney disease and frequently manifests with multi-system functional disturbances, among which sleep disorders are particularly prominent. Elderly female patients are especially vulnerable to refractory insomnia due to physiological decline of kidney qi, postmenopausal endocrine dysregulation, and metabolic imbalances caused by dialysis [1]. Research indicates that approximately 80% of maintenance hemodialysis patients suffer from sleep disorders [2], which not only exacerbate cardiovascular complications but also trigger anxiety and depression, creating a vicious cycle. Western medicine primarily employs sedative medications, yet elderly patients with compromised multi-organ function are prone to drug dependence and cognitive decline with long-term use. Moxibustion, a traditional Chinese medicine (TCM) external therapy, offers warming meridian and harmonizing yin-yang effects that align with modern medical principles of improving microcirculation and regulating neuroendocrine function. For uremia-related insomnia, moxibustion both supplements spleen-kidney yang to ameliorate deficiency symptoms and regulates autonomic nervous function to restore sleep rhythms. Its non-invasive, low-risk characteristics make it particularly suitable for elderly patients. Recent studies have confirmed that moxibustion can improve sleep by modulating neurotransmitters and inhibiting inflammatory cytokines [3]. This case study analyzes the nursing care of an elderly female uremia patient with severe sleep disorders treated with moxibustion, providing novel insights for addressing sleep disturbances in this population and accumulating empirical

evidence for promoting TCM-based nursing interventions.

## 1. Case Data

Ms. Yang, a 67-year-old female, presented on XX/XX/2023 with “maintenance hemodialysis for over 15 years, insomnia worsened for 1 month.” Her medical history revealed a diagnosis of chronic kidney disease stage 5D sixteen years prior, with regular hemodialysis three times weekly and hemofiltration plus perfusion every two weeks. She had concurrent primary hypertension and renal hypertension. Persistent insomnia began fifteen years ago at dialysis initiation, characterized by difficulty falling asleep and three or more nocturnal awakenings, requiring long-term dependence on 0.5 tablet of diazepam for sleep. Her past medical history included chronic nephritis diagnosed twenty years ago due to edema and fatigue, which progressed to uremia without standardized treatment. During her fifteen years of maintenance dialysis, she experienced recurrent hypertensive crises and sleep disturbances. She denied histories of diabetes, coronary heart disease, or psychiatric disorders.

Physical examination revealed temperature 36.5°C, pulse 82 beats/min, respiration 18 breaths/min, and blood pressure 158/94 mmHg (pre-dialysis). Specialized examination showed pale eyelids and nail beds, bilateral pretibial pitting edema (++), and scattered moist rales at lung bases. Laboratory findings included hemoglobin 118 g/L, serum creatinine 856 mol/L, and dialysis adequacy indices of Kt/V 1.32 and URR 68%.

TCM four diagnostic methods identified fatigue, low voice, shortness of breath, self-reported poor appetite with postprandial abdominal distension, and sore, heavy lower back and knees. She had loose stools 2-3 times daily and clear, copious urine. Tongue presentation showed an enlarged body with teeth marks, pale white color, and thin white coating. Pulse was deep, thin, and weak at both chi positions, and soft-weak at the right guan position.

Western medicine diagnosis: Chronic kidney disease stage 5D; renal hypertension; chronic insomnia disorder.

TCM diagnosis: Yin-Yang Deficiency Syndrome with (1) main symptoms: aversion to cold, cold limbs, sore lower back, dry mouth and throat, and five-center heat; (2) secondary symptoms: nocturia, dry stools, pale tongue with teeth marks, and deep thin pulse.

## 2. Nursing Assessment

The patient presented with spleen-kidney qi deficiency-type insomnia resulting from long-term hemodialysis, complicated by medication dependence and decreased quality of life. Additional risk factors included advanced age, extensive dialysis duration, and hypertension.

### 3. Nursing Plan

Maintain the existing hemodialysis and antihypertensive regimen while implementing moxibustion during dialysis sessions to improve sleep quality.

### 4. Nursing Measures

The patient was positioned supine with lower limbs abducted 15° and a fixed moxibustion box to avoid catheter traction. Acupoints selected were Zusanli (ST36), Sanyinjiao (SP6), and Taixi (KI3). Using smokeless moxa sticks held 3 cm from the skin, suspended moxibustion was applied until local redness appeared and the patient felt warmth without burning pain. Treatment commenced 30 minutes after dialysis initiation, avoiding the peak ultrafiltration period. Skin integrity was examined before and after treatment, and cold compresses were applied to acupoints for 5 minutes post-dialysis to prevent blistering. Treatments were administered every other dialysis day, 15 minutes per point, with 4 weeks constituting one therapeutic course.

### 5. Treatment Outcomes

Following treatment, the PSQI total score decreased from 15 to 5, sleep latency shortened from over 60 minutes to less than 20 minutes, diazepam was completely discontinued, and nocturnal awakenings reduced from 3 times to 0-1 times. Concurrently, blood pressure fluctuations diminished and dry weight decreased.

### 6. Special Features

This approach integrates moxibustion into the dialysis nursing workflow, achieving “treatment-nursing-rehabilitation” integration, with moxibustion duration dynamically adjusted based on blood pressure variations during dialysis.

### Theoretical Discussion

In TCM, uremia falls under the category of “long bi” (dysuria). The condition arises when external pathogens injure kidney collaterals, improper diet damages the spleen and stomach, or overexertion consumes kidney essence, leading to renal functional decline. The pathogenesis involves root deficiency and branch excess. Root deficiency manifests as spleen-kidney deficiency with yang qi depletion, causing abnormal water metabolism and generating internal damp-turbidity and blood stasis, which may progress to combined qi-yin and yin-yang deficiency. Branch excess involves damp-turbidity, blood stasis, and heat-toxins. Damp-turbidity invades the spleen-stomach and obscures sensory orifices, blood stasis affects the spirit-mind, and heat-toxins scorch yin fluids, collectively worsening the condition. Sleep disorders belong to the “insomnia” category. In uremia patients, toxin accumulation and electrolyte-acid-base imbalances affect

neurological function and alter neural excitability. Combined with psychological stress from chronic illness, anxiety, depression, and frequent hypertension complications, these factors collectively impair sleep quality.

This patient's twenty-year disease course resulted in chronic consumption causing dual deficiency of yin and yang, creating an imbalanced state where "yin fails to restrain yang and yang fails to secure yin." The kidney serves as the residence of water and fire. Kidney yin deficiency leads to insufficient yin fluids and internal empty fire, manifesting as five-center heat and dry mouth-throat. Kidney yang deficiency results in impaired qi transformation and water retention, producing lower limb edema and nocturia. The spleen is the source of qi and blood production. Spleen yang deficiency causes impaired transformation and transportation, leading to poor appetite and loose stools. Spleen yin deficiency creates fluid deficiency that fails to nourish the heart-spirit, exacerbating insomnia. Yin and yang are mutually rooted and interdependent, and long-term dialysis further consumes genuine yin and yang, forming a vicious cycle. Moxibustion harnesses the gentle warmth of moxa fire to both warm and unblock spleen-kidney yang for qi transformation and water movement, while simultaneously activating meridian qi to nourish yin fluids, thereby balancing yin and yang and effectively improving yin-yang deficiency-type insomnia.

This case selected three acupoints: Zusanli, Sanyinjiao, and Taixi. Zusanli belongs to the Foot-Yangming Stomach Meridian, which is abundant in qi and blood. Moxibustion at this point invigorates spleen-stomach yang qi, promoting qi and blood production; when yang qi is replenished, yin fluids naturally generate. Sanyinjiao is the intersection point of the liver, spleen, and kidney meridians, and moxibustion here simultaneously nourishes all three yin aspects: supplementing liver blood to calm the ethereal soul, benefiting spleen yin to tranquilize the spirit, and filling kidney essence to stabilize the will. When yin-blood of these three organs is replenished, empty fire descends and the spirit-soul returns to its proper place. Taixi is the source point of the Foot-Shaoyin Kidney Meridian where the kidney's original qi gathers. Moxibustion at this point can activate the kidney's original yin and original yang, enabling kidney water to ascend and nourish heart fire while heart fire descends to warm kidney water. When water and fire mutually support each other, sleep and wakefulness become regular. This three-point combination addresses both the root of yin-yang deficiency and the manifestation of spirit-mind malnourishment [4].

Modern pharmacology research indicates that heat and volatile substances (such as eucalyptol and camphor) produced during moxa combustion are absorbed through the skin, with some components exhibiting anti-inflammatory and sedative effects [5] that help alleviate chronic inflammatory states from long-term dialysis and relieve physical fatigue, laying a foundation for sleep improvement. Moxibustion's thermal stimulation directly acts on nerve endings beneath acupoints, transmitting neural signals to the brain to regulate sleep-related brain region activity. It also dilates local vessels, improves lower limb circulation, and helps eliminate interstitial fluid, consistent with the observed reduction in

lower limb edema during treatment. Furthermore, sustained acupoint stimulation from moxibustion regulates gastrointestinal function, promotes digestive secretion, relieves abdominal distension and poor appetite, thereby indirectly improving sleep quality. This case confirms that moxibustion therapy, through multi-level and multi-target holistic regulation, can effectively reverse the pathological state of dual yin-yang depletion in uremia patients, exerts tranquilizing effects, and improves sleep quality.

## Conclusion

Moxibustion can significantly improve spleen-kidney function and sleep quality in elderly uremia patients. The intervention is convenient to administer and free of side effects, making it worthy of clinical promotion.

## References

- [1] Lin Xiuling, Xu Yan, Yang Jing, et al. Investigation and analysis of sleep quality and influencing factors in 727 elderly individuals[J]. World Journal of Sleep Medicine, 2023, 10(1): 45-47.
- [2] Zhu Liuyu. Analysis of causes of sleep disorders in maintenance hemodialysis patients and nursing countermeasures[J]. World Journal of Sleep Medicine, 2023, 10(2): 406-408.
- [3] Wang Bo, Jiang Xicheng. Research progress in Chinese and Western medicine treatment of post-stroke insomnia[J]. Advances in Clinical Medicine, 2023, 13(12): 19394-19398.
- [4] Zhou Yan, Zhou Bokai, Yu Hairui, et al. Meta-analysis of moxibustion for insomnia treatment[J]. World Latest Medicine Information (Continuous Electronic Journal), 2024, 24(15): 110-114.
- [5] Zheng Kun, Zhong Xiaofei, Zhang Hua. Research progress on volatile oil components of mugwort leaf and their pharmacological effects[J]. Chinese Journal of Experimental Traditional Medical Formulae, 2020, 26(18): 224-234.

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

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