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## Exploring the Nursing Effects of Acupoint Massage Based on Midnight-Noon Ebb-Flow Theory for a Patient with Vertigo

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### Abstract

This article summarizes the nursing intervention of acupoint massage based on the Midnight-Noon Ebb-Flow theory for a patient with vertigo.

### Full Text

## Exploring the Nursing Effects of Acupressure Based on Midnight-Noon Ebb-Flow Theory on a Patient with Vertigo: A Case Report

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### Abstract

This paper summarizes a nursing intervention involving acupressure based on midnight-noon ebb-flow theory for a patient with vertigo. Through comprehensive assessment, syndrome differentiation-based acupoint selection, and scientific implementation, this approach effectively improved the patient's vertigo symptoms, enhanced sleep quality, and increased self-care ability. The results were significant and warrant clinical promotion.

**Keywords:** midnight-noon ebb-flow theory; acupressure; vertigo; nursing

### Introduction

Vertigo primarily manifests as impaired spatial balance and orientation [1] and frequently occurs in individuals over 60 years old, often accompanied by dizziness, a heavy head sensation, lightheadedness, and unsteady standing [2]. Tra-

ditional Chinese Medicine (TCM) categorizes the etiology and pathogenesis of vertigo into internal injury and external contraction categories. Internal injury vertigo is triggered by factors such as wind, fire, stasis, and phlegm, while external contraction vertigo results from the six exogenous pathogenic factors ascending along the meridians, obstructing the clear orifices and impairing the ascent of clear yang. Liver Yang Hyperactivity Pattern represents a common clinical syndrome, with treatment principles focusing on calming the liver, subduing yang, and nourishing the liver and kidneys [3]. Acupressure, a frequently employed technique in TCM nursing, stimulates acupoints to unblock meridians, regulate qi flow, and refresh the mind [4]; however, its efficacy as a standalone treatment remains limited.

Midnight-noon ebb-flow theory represents a sophisticated TCM chronomedical framework that transcends conventional treatment approaches by incorporating temporal medicine principles. By aligning treatment with the natural flow of meridian qi and regulating the body's yin-yang balance according to circadian rhythms, this theory aims to achieve therapeutic goals [5]. Selecting optimal treatment times based on the qi-blood flow patterns of the twelve regular meridians, combined with TCM acupressure techniques, can effectively regulate qi-blood and yin-yang dynamics, thereby improving vertigo-related symptoms [6]. Our department has applied midnight-noon ebb-flow theory in conjunction with acupressure in clinical nursing practice, offering a novel approach for implementing TCM nursing techniques. We present a case demonstrating the application of this combined therapy in a patient with vertigo, which validated its rationality and scientific merit through practice and warrants broader clinical adoption [7].

## Clinical Data

The patient was an 85-year-old male admitted with a primary complaint of “recurrent dizziness accompanied by lower limb weakness for over one month” and diagnosed with vertigo (essential hypertension). The patient reported progressively worsening dizziness and fatigue, with occasional rotational vision and transient blackouts. He had a 20-year history of hypertension with reportedly regular medication and acceptable blood pressure control, a 22-year history of coronary artery disease with a myocardial infarction nine years prior (irregular medication, unknown control status), and a seven-year history of chronic renal insufficiency with regular medication (specifics unknown). He had an iodinated contrast agent allergy but denied food or drug allergies. Admission symptoms included intermittent dizziness that could be relieved by rest, occasional rotational vision, transient blackouts, and lower limb weakness without headache. TCM diagnosis: Vertigo (Liver Yang Hyperactivity Pattern). Western medicine diagnosis: Essential hypertension.

## Assessment

### General Condition Assessment

1. **Vital signs assessment:** With a 22-year history of hypertension, the patient's systolic blood pressure ranged from 190–170 mmHg and diastolic pressure from 100–90 mmHg, classified as Grade 3 (very high risk) according to hypertension grading standards [8].
2. **Activities of Daily Living (ADL):** Barthel Index score was 30 points, indicating severe functional impairment (Level 3).
3. **Fall risk assessment:** Score of 75 points; bed-fall risk assessment: 3 points.
4. **Sleep quality assessment:** Pittsburgh Sleep Quality Index (PSQI) score was 17 points, indicating very poor sleep quality.
5. **TCM physical examination:** Clear consciousness, flushed face, dry mouth, bitter taste, dark yellow urine, constipation, red tongue with thin yellow coating, and wiry-slippery pulse.

**Vertigo Condition Assessment** Using the Dizziness Handicap Inventory (DHI) [9] (see Appendix 1), we conducted a comprehensive evaluation of the patient's vertigo severity across three dimensions: physical, functional, and emotional. Higher scores indicate more severe vertigo. The patient's composite score was 84 points, classified as Level D severity.

## Intervention

**Acupressure Method Acupoint Selection Principles:** Based on the aforementioned assessment and research on the etiology and pathogenesis of geriatric vertigo with Liver Yang Hyperactivity Pattern, which primarily involves the liver, spleen, and kidneys, we selected acupoints along these three meridians for treatment [10]. According to midnight-noon ebb-flow temporal standards and the circadian flow patterns of the twelve meridians [11], the Liver Meridian is dominant during the Chou period (1:00–3:00 AM), which is unsuitable for intervention in elderly vertigo patients. Therefore, we selected the Spleen Meridian of Foot-Taiyin during the Si period (9:00–11:00 AM) and the Kidney Meridian of Foot-Shaoyin during the You period (5:00–7:00 PM) as primary meridians, with Liver Meridian and head acupoints as adjunct points [12].

Specifically, during the morning session (9:00–11:00 AM), we selected Sanyinjiao (SP6), Taibai (SP3), and Fenglong (ST40) from the Spleen Meridian as primary points, with Taichong (LR3), Xingjian (LR2), Baihui (GV20), and Taiyang (EX-HN5) from the Liver Meridian and head region as adjunct points [13]. During the afternoon session (5:00–7:00 PM), we selected Yongquan (KI1), Taixi (KI3), and Fuli (KI7) from the Kidney Meridian as primary points [14], with Taichong (LR3), Xingjian (LR2), Baihui (GV20), and Taiyang (EX-HN5) as adjunct points [15]. This combination of acupoints works synergistically to unblock meridians, regulate qi flow, harmonize emotions, balance qi-blood in the liver-spleen-kidney system, and thereby regulate organ function to improve clinical symptoms of geriatric vertigo [16].

**Massage Technique:** The method applied in this case followed the principle that techniques moving along the meridian direction with gentle pressure, slow speed, and counterclockwise rotation constitute tonifying methods to supplement spleen and kidney, while techniques moving against the meridian direction with slightly heavier pressure, faster speed, and clockwise rotation constitute sedating methods to drain liver yang [17]. We applied sedating techniques for head acupoints (Baihui, Taiyang) and Liver Meridian points (Taichong, Xingjian), while using tonifying techniques for Spleen Meridian points (Sanyinjiao, Taibai, Fenglong) and Kidney Meridian points (Yongquan, Taixi, Fuliu) [18].

The patient was instructed to assume a supine position and relax. Nurses applied the kneading technique, placing the thumb pad on the acupoint and performing circular kneading while the other four fingers naturally extended together to provide stabilization and assistance. The procedure followed the principle of left before right and top to bottom. Treatment was considered effective when patients experienced local sensations of soreness, numbness, heaviness, or distension, or when slight skin redness appeared, with the overall sensation being comfortable and painless [19]. Treatment was administered twice daily, two minutes per acupoint, for a total of 20 minutes per session, with a 28-day intervention course.

Acupoint locations were determined according to *Acupuncture Science* [20] and *Acupuncture and Tuina Science* [21] (see Table 1 ).

## Nursing Effect Evaluation

Before treatment, the patient's blood pressure ranged from 190–170/100–90 mmHg; ADL assessment was 30 points (severe functional impairment); fall risk assessment was 75 points and bed-fall risk was 3 points (higher scores indicate greater risk); PSQI assessment was 17 points (higher scores indicate poorer sleep quality); and bowel/urine status showed dark yellow urine and constipation. After treatment, blood pressure was controlled within 160–140/90–80 mmHg; ADL assessment improved to 70 points (mild functional impairment); fall risk decreased to 45 points and bed-fall risk to 1 point (lower scores indicate reduced risk); PSQI assessment improved to 6 points (lower scores indicate better sleep quality); and bowel/urine function normalized (see Table 2 ).

Analysis using the Dizziness Handicap Inventory showed the total score decreased from 86 points pre-treatment (Level D severity) to 16 points after 28 days of intervention (Level B severity) (see Table 3 ). In summary, this case demonstrated significant intervention effects.

## Discussion

Vertigo is a common clinical symptom of balance dysfunction with numerous etiologies, most frequently hypertension-induced vertigo [22]. Hypertensive vertigo predominantly affects elderly populations, and with population aging, its

incidence continues to rise [23]. Clinical manifestations include severe vertigo or swaying sensations, nausea, vomiting, and in severe cases, transient loss of consciousness, significantly impacting quality of life [24]. Literature demonstrates that appropriate nursing care facilitates treatment and recovery in vertigo patients, though conventional single-modality acupressure shows limited efficacy.

Midnight-noon ebb-flow theory represents a chronomedical approach based on qi-blood circulation patterns, utilizing time-specific acupoint selection for intervention [25]. Combined with acupressure for geriatric vertigo, this approach applies treatment during peak qi-blood flow periods in target meridians. The technique employs light pressure as tonifying and heavy pressure as sedating; counterclockwise rotation as tonifying and clockwise as sedating; and slow speed as tonifying and fast speed as sedating. This method harnesses natural physiological rhythms to harmonize yin-yang and regulate qi-blood, thereby improving clinical symptoms [26] and enhancing therapeutic efficacy. Applying these time-dependent physiological and pathological patterns in treatment represents the integration of human physiology with natural cycles and demonstrates the advantages of chronotherapy [27]. Time-specific acupressure effectively improved vertigo-related symptoms, regulated emotional states, and assisted in blood pressure reduction, leading to improvements in physical, emotional, and functional domains, alleviating vertigo severity and enhancing quality of life. Therefore, TCM chronotherapy nursing based on midnight-noon ebb-flow theory proves superior to conventional nursing models.

In conclusion, acupressure based on midnight-noon ebb-flow theory effectively improves clinical symptoms in elderly vertigo patients, reduces economic burden, and offers a simple yet effective treatment worthy of clinical promotion. As this study represents a case report, future work should expand sample sizes to further investigate the scientific validity and effectiveness of this approach in treating geriatric vertigo.

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