

Treatment of Vertigo Based on "All Wind-Induced Tremors and Vertigo Are Associated with the Liver"

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Abstract: Vertigo is a common clinical symptom with high incidence and complex etiology, involving multi-system disorders (modern medicine) and multi-Zang-Fu dysfunction (TCM), severely impairing patients' daily life. The theory "All wind-induced tremors and vertigo are associated with the liver" from Huangdi's Inner Canon is a classic TCM guideline for vertigo, revealing the liver's core role in its pathogenesis. This paper sorts the liver's physiological characteristics as "Zang-organ of wind and wood", explains vertigo's correlation with liver-related pathogenesis (internal stirring of liver wind with subtypes, liver yang hyperactivity), and analyzes liver-based syndrome differentiation and treatments (calming liver, extinguishing wind, etc.). It consolidates the "liver-centered" theoretical foundation and treatment pathway, providing references for precise TCM application in vertigo.

Keywords: vertigo; "all wind-induced tremors and vertigo are associated with the liver"; Huangdi's Inner Canon; TCM syndrome differentiation and treatment; internal stirring of liver wind; liver yang hyperactivity

1. Overview of Vertigo

1.1 Clinical Significance and Epidemiology

Vertigo is a spatial perception disorder caused by impaired spatial orientation, characterized by subjective motion illusion (rotation, swaying). It onset suddenly, with nausea, vomiting, balance disorders, and may induce panic, affecting life quality[1-2].

As a key subtype of "dizziness", it is closely linked to vestibular dysfunction (peripheral: inner ear; central: brainstem/cerebellum), with bilateral vestibular asymmetry as a key pathogenesis.

Affecting 20%-30% of the general population[3], its incidence rises with age (higher in the elderly). It accounts for 10%-15% of general/neurology outpatient complaints, posing public health and medical resource challenges.

1.2 TCM Understanding of Vertigo

First recorded in Huangdi's Inner Canon as "Xuan" or "Xuanmao" [4], vertigo's etiologies include emotional distress, aging, improper diet, overwork, trauma, and external pathogens. These induce wind, phlegm, blood stasis, or deficiency, disturbing clear orifices or reducing brain nourishment.

Its primary site is the brain, linked to liver, spleen, kidney dysfunction[5]. Classified into deficiency (more common) and excess syndromes clinically.

1.3 Research Background and Objectives

Vertigo's complex etiology leads to poor efficacy due to unclear pathogenesis. TCM emphasizes its close link to the liver, with Huangdi's Inner Canon's theory identifying liver dysfunction as core. Despite prior studies on liver wind or phlegm, systematic analysis of the liver as a key target is lacking.

This study explores the theory's connotation, investigates liver-related pathogenesis (liver wind, liver yang hyperactivity), and builds a "liver-centered" TCM treatment framework to improve efficacy.

2. TCM Theoretical Basis

2.1 Origin and Meaning of the Theory

From Suwen·Zhizhen Yaodalun of Huangdi's Inner Canon (a core "Nineteen Pathogenesis Principles" assertion) [6], "wind" here includes "internal wind" (Zang-Fu dysfunction-induced unsteady movement) [7]; "diao" (tremor) and "xuan" (vertigo) reflect "wind's mobility".

Its core: Wind-related diseases with tremor/vertigo originate from liver dysfunction. TCM regards the liver as "wind-wood Zang-organ"—governing ascending/mobility, with yin substance and yang function. Qi-blood-yin-yang imbalance

induces "internal liver wind", causing vertigo [8]. "Wind excess causes shaking" (Suwen) [9] confirms this. Stagnated liver qi, hyperactive liver yang, or deficient liver yin all trigger wind to disturb clear orifices. This 2,000-year-old theory remains pivotal for TCM vertigo treatment.

2.2 Liver-Vertigo Correlation

As "wind-wood Zang-organ", the liver's physiology/pathology determines its core role.

Wind organ: Liver (wood) corresponds to wind. Dysfunction (hyperactive yang, deficient yin) breaks yin-yang balance, generating internal wind that disturbs the brain, causing vertigo [10].

Qi regulation: The "hard Zang-organ" governs dispersion, easily disrupted by emotions. Stagnated qi impairs blood supply to the head; stagnation-fire consumes yin or stirs yang into wind, inducing vertigo.

Emotional link: "Prefers unobstruction" — rage reverses liver qi upward; long-term depression breeds fire-wind, making emotional vertigo most common.

Liver-kidney homology: Blood (liver) and essence (kidney) nourish each other. Kidney yin deficiency ("water fails to nourish wood") or liver yin loss causes yang hyperactivity/wind, explaining vertigo in the elderly/chronic patients.

Syndrome nature: Deficiency (liver-kidney yin/blood loss) and excess (stagnated qi-fire, hyperactive yang) syndromes all involve liver dysfunction.

3. Pathogenesis Analysis

3.1 Internal Stirring of Liver Wind

Internal stirring of liver wind is a common core pathogenesis of vertigo, categorized into four types. All share the pathological link of "wind's nature of mobility" disturbing clear orifices, ultimately causing vertigo.

3.1.1 Wind Transformed from Liver Yang

Core pathogenesis: Liver-kidney yin deficiency and unconstrained liver yang hyperactivity. Caused by long-term emotional depression (qi stagnation→fire→yin consumption) or age-related kidney yin deficiency ("water failing to nourish wood"). Unrestrained yang ascends to form wind, disturbing clear orifices — manifesting as severe rotational vertigo, headache, stiff neck; severe cases: limb tremors or sudden falls [13].

3.1.2 Wind Generated by Extreme Heat

Core pathogenesis: Excessive heat consumes yin and stirs liver wind. Caused by late-stage exogenous febrile diseases or persistent Zang-organ heat. Heat damages liver yin, leading to tendon malnutrition and wind stirring — accompanied by high fever, delirium, convulsions, opisthotonos, and persistent severe vertigo [14].

3.1.3 Wind Due to Yin Deficiency

Core pathogenesis: Liver yin deficiency→tendon malnutrition→deficient wind. Caused by chronic illness or emotional fire consuming yin. Insufficient liver yin fails to nourish clear orifices, while deficient wind disturbs the head—manifesting as persistent vertigo (worse with movement), tinnitus, dry eyes, five-center heat, tidal fever, night sweats.

3.1.4 Wind Due to Blood Deficiency

Core pathogenesis: Liver blood deficiency→tendon malnutrition→deficient wind. Caused by chronic blood loss or spleen-stomach weakness (insufficient qi-blood production). The liver stores blood that nourishes clear orifices and tendons; blood deficiency induces internal deficient wind—manifesting as dizziness (worse with movement), limb tremors/numbness, pale face/lips, dull nails.

In summary, all types of internal liver wind stem from liver qi-blood-yin-yang imbalance, generating internal "wind pathogen" that disturbs clear orifices. Vertigo is a typical symptom.

3.2 Liver Yang Hyperactivity

Liver yang hyperactivity, another core pathogenesis, precedes internal liver wind—progressing to "wind transformed from liver yang". Its core mechanism is "liver-kidney yin deficiency, yin failing to constrain yang" [15].

3.2.1 Etiological Origin

Causes include two categories: 1) Emotional factors: long-term anger/anxiety→liver qi stagnation→fire→consuming liver-kidney yin→yang floating upward; 2) Deficiency factors: aging/overwork→kidney yin deficiency ("water failing to nourish wood"). Both are "deficiency in origin, excess in superficiality" (yin deficiency as root, yang hyperactivity as manifestation).

3.2.2 Clinical Manifestations

Vertigo here features dizzy/distending head with rotation, plus yang hyperactivity symptoms (tinnitus, flushing, irritability, dream-disturbed sleep) and yin deficiency signs (waist soreness, heavy head/light feet). Tongue: red with scanty/yellow coating; Pulse: wiry or thin-rapid. Symptoms worsen with fatigue/emotion; bitter dry throat is also common.

4. Summary

4.1 Theory Significance

Guides pathogenesis identification (highlights liver-vertigo link), provides syndrome differentiation basis, directs clinical practice, and emphasizes the liver's core role.

4.2 TCM Advantages and Limitations

Advantages: Individualized syndrome differentiation, holistic "root-branch" treatment, non-pharmacological therapies (few side effects), improves symptoms/quality of life, reduces Western medicine adverse reactions.

Limitations: Insufficient clinical evidence, difficult efficacy evaluation, long treatment cycle (poor compliance), small samples.

4.3 Future Research

Deepen TCM theory: Modernize the theory via integration with modern medicine.

Improve efficacy evaluation: Combine subjective scores and objective indicators.

Large-sample RCTs: Verify TCM efficacy vs. Western medicine.

Non-pharmacological therapies: Study acupuncture/tuina mechanisms and combination strategies.

Integrated treatment: Explore TCM holistic regulation+Western medicine symptomatic treatment.

Modern science: Use molecular/neurobiology to identify pathogenesis and TCM targets.

International cooperation: Promote TCM globally and absorb foreign advances.

These directions will advance "liver-centered" vertigo treatment's theory and practice.

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