

Treatment of Menopausal Syndrome Insomnia Based on the Theory of the Five Elements Theory

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Abstract:

Menopausal syndrome insomnia is a common and quality-of-life-affecting issue for women during the menopausal phase. Chronic insomnia can cause numerous harms to the physical and mental health of patients, such as lethargy and decreased immunity, making effective treatment crucial. However, there are certain difficulties in treatment, such as the condition being influenced by various complex factors, making it hard to control the direction of treatment accurately. Traditional Chinese medicine (TCM) has unique advantages in dealing with such conditions. Based on the Five Elements theory, there are interrelationships of mutual restraint and promotion between the five viscera, such as the nourishing relationship of heart fire to spleen earth, and the promoting relationship of liver wood to heart fire. When these relationships are out of balance, they are closely related to the occurrence of menopausal syndrome insomnia. In light of this, TCM treatment methods such as nourishing blood and calming the spirit, nourishing Yin and reducing heat, nourishing Yin and subduing Yang, clearing liver and purging heat, benefiting Qi and lifting Yang, and strengthening the spleen and harmonizing the liver can be skillfully applied. By adjusting the balance of Qi and blood, Yin and Yang, and restoring the normal function of the viscera, a comprehensive treatment strategy can be effectively implemented to achieve the effect of treating both the root and the symptoms, providing a good approach to improving the condition of menopausal syndrome insomnia.

Keywords:

Insomnia
Menopausal syndrome
Five Elements Theory
Etiology and pathogenesis
Relationships of the five viscera

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1. Introduction

Menopause is a significant stage in women's lives, during which many experience a range of physical and mental symptoms due to fluctuations or decreases in sex hormone levels. Insomnia is one of these common symptoms that severely affects quality of life ^[1,2]. This symptom cluster primarily affects women aged 45 to 60, with indications suggesting that this age range is gradually decreasing ^[3]. As reproductive hormone levels decline during the perimenopausal period, most women undergo physiological and psychological changes. With increasing age, insomnia becomes one of the primary complaints among postmenopausal women. Insomnia is a sleep disorder characterized by difficulty falling asleep ^[4]. In an international women's health study involving over 12,000 women, nearly 40% reported sleep difficulties during the menopausal transition ^[5]. Sleep difficulties can lead to fatigue, lethargy, emotional disturbances, impaired memory, decreased concentration, and even accidents, resulting in behavioral, occupational, and social issues ^[6]. Additionally, menopausal women often experience other typical symptoms of menopause, including hot flashes, night sweats, palpitations, emotional changes, anxiety, and depression, which also increase the risk of developing sleep disorders ^[7]. Long-term insomnia significantly impacts patients' health, utilization of medical resources, quality of life, and work performance ^[8]. Recent studies have also revealed that insomnia is associated with major health issues, such as increased risks of cardiovascular disease, diabetes, and even death ^[9]. Proserpio and colleagues reviewed the mechanisms and treatments of insomnia in postmenopausal women, with content similar to this overview ^[10]. Hormone Replacement Therapy (HRT) has been a conventional and effective strategy for managing perimenopausal symptoms ^[11]. However, some women may choose not to use HRT due to concerns about potential risks of breast cancer, endometrial cancer, and ovarian cancer. Recently, advancements in traditional Chinese medicine techniques have demonstrated increasing advantages in treating sleep disorders caused by female menopause. Many traditional Chinese medicine preparations have been proven to improve insomnia caused by menopause syndrome ^[12]. The five-element theory, relying on the concept of "holistic view," employs analogy and dialectic means to understand and address

human diseases, providing a macro and systematic thinking framework for medicine ^[13]. This article connects insomnia during menopause syndrome with the five organ systems in the five-element theory, analyzes its pathological mechanism, and offers new ideas for the treatment of insomnia during menopause syndrome in traditional Chinese medicine.

2. Understanding of insomnia in climacteric syndrome from Traditional Chinese Medicine

Insomnia related to climacteric syndrome falls into the categories of "insomnia," "lily disease," "visceral dryness," and "various symptoms before and after menopause" in Traditional Chinese Medicine. According to Chinese medicine theory, the main pathogenesis of insomnia in climacteric syndrome is attributed to the decline of kidney Qi, deficiency of Chong and Ren meridians, depletion of Tiangui (a substance essential for reproductive function in women), insufficiency of menstrual blood, imbalance of Yin and Yang, and disharmony of organs and Qi-blood ^[14]. As women enter menopause, their kidney Qi gradually declines, leading to kidney Yin deficiency and essence blood depletion. This results in Yin-Yang imbalance, preventing Yang from entering Yin, thus causing insomnia. As recorded in the "Plain Questions: On the Naive and the Natural," "When a woman reaches the age of 49, her Ren meridian becomes deficient, her Tai Chong meridian declines, her Tiangui is depleted, and her menstrual cycle ceases, thus her body deteriorates and she becomes unable to bear children." The five elements theory in Chinese medicine utilizes the characteristics of the five elements to analyze the physiological functions and pathological changes of the five organs ^[15]. Among the five elements, fire is warm and hot, with an upward tendency. The heart belongs to fire in the five elements, and heart Yang has the function of promoting and warming, ensuring continuous vitality, smooth flow of the heart meridian, and clarity of mind, maintaining the normal functions of the heart governing blood vessels and storing the mind. Adequate heart yang nourishes the mind, ensuring normal mental activities, helping to maintain Yin-Yang balance, enabling the normal functioning and orderly operation of

the five organs, and promoting stable sleep. If heart Yang is insufficient, it may lead to restlessness of the mind. When Yang cannot enter Yin, or Yin cannot exit Yang, insomnia occurs. The liver belongs to wood in the five elements, responsible for regulating and smoothing Qi. If liver Qi becomes stagnant or liver yang rises excessively, it may affect the mind, leading to insomnia. The spleen belongs to earth in the five elements, responsible for transportation and transformation, and is the source of Qi and blood generation. If spleen Qi is weak and Qi and blood generation is insufficient, the mind loses nourishment, which may also cause insomnia. The lungs belong to metal in the five elements, responsible for Qi and breathing. If lung Qi is weak or lung function is impaired, it may affect Qi and blood circulation, further affecting the mind and leading to insomnia. The kidneys belong to water in the five elements, are responsible for storing essence and are considered the foundation of “先天之本 (innate constitution).” If kidney essence is insufficient and cannot nourish the heart, leading to excessive heart fire, it may also cause insomnia. Therefore, treatment should start from the relationship of generation, restriction, overaction, and counter-restriction among the five elements, comprehensively regulating the functions of the five organs to restore the normal relationship among the five elements^[16].

3. The relationship between generation, restraint, overaction, and insult among the five elements is closely related to insomnia in menopause syndrome.

“Treatise on Various Diseases and Their Treatments: Insomnia” states, “When Yang Qi naturally transitions from activity to stillness, sleep occurs. When Yin Qi naturally transitions from stillness to activity, wakefulness occurs. Insomnia arises when yang fails to intersect with Yin.” The five elements - wood, fire, earth, metal, and water - exhibit relationships of generation, restraint, overaction, and insult, which coordinate the interactions among the internal organs. Insomnia during menopause syndrome may be caused by an imbalance in these relationships, leading to dysfunction of the internal organs, imbalance of Yin and Yang, and disharmony of Qi and blood, thereby affecting sleep. The following are common imbalances.

3.1. Relationships between the generation and restraint among the five elements and insomnia in menopause syndrome

(1) Fire generates earth

As stated in the “Huangdi Neijing” (Yellow Emperor’s Inner Canon of Medicine), “The liver, represented by wood, stores blood to nourish the heart fire, and the warmth of the heart fire warms the spleen earth.” The heart belongs to fire and governs the mind, while the spleen belongs to earth and is responsible for transformation and transportation. Heart fire is the mother and spleen earth is the child. The Yang Qi of the heart can warm the spleen Yang, and when the spleen Yang is healthy and vigorous, it can transform and generate Qi and blood, nourishing the heart blood. Sufficient heart blood requires the transformation of water and grain essence^[17]. The “Huangdi Neijing” mentions, “Human growth is first rooted in the essence of the kidneys, giving birth to wood, metal, and earth from water and fire. These are the innate five elements. Human aging progresses from liver wood to fire, earth, metal, and water, representing the acquired five elements.” If the spleen loses its healthy function, Qi and blood cannot be generated, and the heart’s blood supply becomes inadequate, possibly leading to heart dysfunction. This, in turn, can cause adverse effects on the parent organ, manifesting as pathological influences of the child organ on the parent organ. Insufficient heart Qi leads to fire not generating earth, blood circulation without Qi, spleen Qi deficiency, Qi and blood deficiency, resulting in symptoms of insomnia due to lack of nourishment and a restless mind. For example, menopausal women often experience emotional fluctuations, anxiety, and irritability, causing liver Qi to stagnate and attack the spleen. Alternatively, irregular eating habits and excessive consumption of cold and greasy foods can damage the spleen and stomach yang, leading to spleen dysfunction. As a result, Qi and blood cannot be generated, and the heart blood is not adequately nourished, easily triggering insomnia symptoms^[18].

(2) Wood generates fire

As stated in the “Su Wen: Yin Yang Ying Xiang Da Lun” (Basic Questions of Yellow Emperor’s Inner Canon of Medicine: Correspondence Between Yin and Yang), “The east gives birth to wind, wind gives birth to wood, wood gives birth to sourness, sourness gives

birth to the liver, the liver gives birth to tendons, tendons give birth to the heart, and the liver gives birth to the eyes.” Between the heart and liver, the liver belongs to wood, and the heart belongs to fire, forming a mother-child relationship. Sufficient liver blood can nourish the heart’s blood and ensure normal heart function. The heart’s blood circulation function is closely related to the liver’s Qi regulation, and its filling degree also depends on the liver’s blood storage and regulation function. If the relationship between the liver and heart in the five-element theory is unbalanced, such as long-term stress or accumulation of negative emotions leading to insufficient liver blood, they may mutually affect each other. That is, diseases of the parent organ can spread to the child organ, and vice versa. The “Huangdi Neijing: Su Wen: Wu Zang Sheng Cheng” (Yellow Emperor’s Inner Canon of Medicine: Basic Questions: Formation of the Five Zang Organs) states, “When a person sleep, the blood returns to the liver. The liver receives blood and can see, the feet receive blood and can walk, the palms receive blood and can grasp, and the fingers receive blood and can pick up things.” The liver can store blood and distribute it according to the body’s activity status. When a person is sleeping, the blood returns to the liver. If the liver’s blood storage function is dysfunctional, such as insufficient liver blood, it will cause heart blood deficiency. Insufficient heart blood cannot nourish the mind well, leading to a lack of nourishment and insomnia, nightmares, and easy startling^[19]. Due to dramatic changes in hormone levels in menopausal women, emotions are extremely unstable, prone to liver Qi stagnation or liver yang hyperactivity. This not only affects the normal generation and storage of liver blood but also interferes with the generation of heart blood and the tranquility of the mind, leading to frequent insomnia^[20].

(3) Water generates wood

As stated in the “Chun Qiu Fan Lu: Wu Xing Da Yi” (Luxuriant Gems of the Spring and Autumn Annals: The Great Meaning of the Five Elements), “Water generates wood because water nourishes and gives birth to wood.” In the five-element theory of Chinese medicine, the kidney and liver have a mother-child relationship. The liver is responsible for blood storage, while the kidney is responsible for sealing essence. The two complement each other. The liver’s blood requires the nourishment

of kidney essence, while kidney essence also needs the replenishment of liver blood, forming a dynamic balance of mutual support and transformation. This mutual generation relationship between essence and blood is crucial for physiological functions and sleep. If liver yin is deficient, it can easily affect kidney Yin, leading to kidney Yin deficiency and inability to nourish the liver, thereby causing insomnia^[21]. Additionally, the liver is responsible for dispersion, and human wakefulness and sleep are regulated by the entry and exit of Ying and Wei Qi, influenced by the liver’s dispersing function. Normal dispersion of liver Qi allows Qi, blood, and body fluids to circulate regularly, with Wei Qi emerging from yang during the day and entering Yin at night, maintaining a normal sleep state^[22]. If kidney water cannot nourish liver wood, leading to liver dispersion dysfunction and Qi stagnation. Liver Qi stagnation can transform into fire, consuming the yin of the liver and kidney over time, and deficiency fire disturbs the heart and forces the fluid to leak, which can also cause insomnia. For example, menopausal women who are chronically overworked may consume the essence of the liver and kidney, or if they are chronically tense and anxious, liver Qi stagnation may break the balance between the liver and kidney, triggering insomnia^[23].

(4) Wood restricts earth

The liver belongs to wood, while the spleen belongs to earth. As mentioned in “Wu Jutong’s Medical Cases: Single Abdominal Distension,” “The disease originates from liver stagnation. When wood stagnates, it restricts the earth. Restricting Yang Earth leads to insomnia while restricting Yin earth causes distension. Self-stagnation results in hypochondriac pain. The liver is responsible for dispersion and drainage, but liver diseases hinder this function, leading to poor excretion... Liver stagnation necessarily restricts Earth. Yin earth stagnation causes distension, while Yang earth stagnation leads to reduced appetite.” Emotional distress, such as long-term depression and anger, accumulates internally and harms the liver, disrupting its smooth functioning. This leads to liver Qi stagnation, improper dispersion and drainage, and dysfunctional Qi movement, which further affects the spleen and stomach’s ascending and descending movements. This can be described as “wood stagnation restricting earth”^[24]. Excessive wood Qi easily overcomes the spleen earth, leading to spleen and stomach

dysfunction. This dysfunction affects food digestion and absorption, resulting in a lack of Qi and blood generation. Pathological products like phlegm dampness caused by spleen and stomach disharmony obstruct the middle Jiao, preventing clear Qi from ascending and turbid Qi from descending. This disrupts the mind and causes insomnia. Due to physiological and psychological changes during menopause, women experience more intense emotional fluctuations, making them prone to liver stagnation affecting the spleen, leading to insomnia symptoms ^[21].

3.2. The relationship of five elements' mutual overcoming and insulting with menopausal syndrome and insomnia

In the theory of the five elements, the relationship between water and fire is particularly important. The heart belongs to fire, while the kidney belongs to water. Heart fire must descend to the kidneys and warm kidney Yin together with kidney Yang, keeping kidney water from being cold. Kidney water, in turn, needs to rise and nourish the heart, nourishing the heart Yang together with heart Yin and preventing heart fire from being excessive ^[25]. This mutual restraint relationship ensures harmony between water and fire, forming a balanced system of Yin and Yang ascent and descent. As stated in "Essential Prescriptions Worth a Thousand Gold for Emergencies," "The heart is fire, the kidney is water and water and fire complement each other." This relationship indicates the crucial dynamic balance of Yin and Yang ascent and descent between the heart and kidneys. If kidney water is deficient due to aging, chronic illnesses harming the kidneys, or excessive fatigue, the kidneys lose their nourishing Yin fluids. Alternatively, overexertion can harm the kidneys, preventing them from nourishing heart fire. This leads to excessive heart fire, causing restlessness and insomnia. Additionally, there is a mutual generation of essence and blood and mutual utilization of spirit between the two. If the water-fire relationship is disrupted and kidney essence is insufficient, it cannot nourish heart blood, leading to heart spirit malnutrition and insomnia. For example, as menopausal women age, their kidney Yin gradually declines. Combined with factors like life stress and unhealthy habits, they are prone to develop a condition where kidney water cannot nourish heart fire, exacerbating insomnia symptoms and severely

affecting their quality of life ^[26].

Metal humiliates fire, and the lung belongs to metal, which means metal can, in turn, restrain fire ^[27]. Normally, fire should restrain metal, and the clear and serene Qi of lung metal should descend to generate kidney water, maintaining the balance of the five elements. However, when the metal Qi is excessively strong or the fire Qi is too weak, this reverse restraint can occur. If the Qi of lung metal is too strong, it may cause the Qi of the lungs to rise upward, which leads to a lack of heart fire and restlessness of the mind. In such cases, patients may not only exhibit symptoms related to the lung system, such as cough and asthma but may also accompany symptoms of the heart meridian, such as upset and insomnia, leading to sleep disorders. For example, after suffering from exogenous diseases, if the lung Qi of women in menopause is not relieved in a timely manner, it may cause the metal of the lungs to humiliate the fire, which can further lead to insomnia. Additionally, some women in menopause who have a long history of smoking or live in an environmentally polluted area are prone to experience an imbalance in their lung Qi, affecting their state of mind and causing insomnia ^[28].

4. Treating insomnia due to menopausal syndrome based on the five elements theory

Illustrating the various connections between the internal organs through the relationship of generation and restraint, multiplication, and humiliation among the five elements can explain the physiological and pathological connections between the five internal organs. It can also be used to resolve pathological conflicts between related organs. For the dialectical treatment of insomnia due to menopausal syndrome, the five elements theory can provide a macro and systematic thinking mode, clarifying the relationship between the organs and deducing the corresponding treatment methods ^[17].

4.1. The transformation of heart fire and spleen earth: Nourishing the heart and spleen, nourishing blood, and calming the nerves

There is a mutual generation relationship between the heart and fire, and both participate in the generation

of Qi and blood. The heart governs blood vessels and stores the mind, while the spleen governs transportation and transformation and controls blood. When the heart loses nourishment and the spleen's function of transportation and transformation is imbalanced, it can lead to a deficiency of both heart and spleen. Insufficient heart blood and failure of blood to nourish the heart can cause restlessness and difficulty falling asleep, as well as frequent dreaming and easy waking, accompanied by palpitations and forgetfulness. On the other hand, weakness of spleen Qi can hinder the effective transformation of water and grain essence, resulting in a lack of Qi and blood generation, further aggravating the insufficiency of heart blood and forming a vicious cycle, ultimately leading to insomnia. The method of nourishing earth to generate fire can be applied, and representative prescriptions include Gui Pi Tang, Gan Mai Da Zao Tang from Jin Gui Yao Lue, and Yang Xin Tang. Medications such as ginseng, astragalus, atracylodes, moxibustion licorice, and *poria cocos* can be used to tonify Qi and strengthen the spleen; longan meat, angelica, *zizyphus jujube*, and polygala can be used to nourish blood and calm the mind; ginger and jujube can harmonize the spleen and stomach to enhance Qi and blood generation, thereby improving symptoms such as insomnia and forgetfulness. Pan *et al.* used Gan Mai Da Zao Tang combined with Gui Shen Wan to treat sleep disorders during perimenopause, achieving a curative effect of 95.0%^[29]. Studies by Jin *et al.* have shown that Tiaoshen Yangxin Tang has significant efficacy in treating perimenopausal insomnia and can also improve patients' symptoms of hot flashes and night sweats^[30].

4.2. Changes in kidney water and heart fire: Nourishing Yin and reducing fire, harmonizing heart and kidney

Water and fire have a mutual-restricting relationship. When the balance between water and fire is disrupted, heart fire cannot descend to the kidneys, and kidney water becomes cold due to the lack of heart fire. This leads to depletion of kidney essence, and lack of nourishment for the marrow sea, resulting in symptoms such as dizziness, tinnitus, soreness and weakness of the waist and legs. On the other hand, when kidney water cannot ascend to nourish heart fire, heart fire becomes hyperactive

due to the lack of nourishment from kidney water. This hyperactivity of heart fire leads to symptoms such as restlessness, insomnia, palpitations, dream-disturbed sleep, feverish sensation in the palms and soles, and nocturnal sweats, resulting in a state of "heat above and cold below," which causes insomnia. During treatment, the method of reducing the south and reinforcing the north can be applied. By nourishing kidney Yin to suppress the hyperactivity of heart fire, kidney Yang can be nourished, and heart fire can be calmed to restore the balance between the heart and kidneys. Prescriptions such as Liuwei Dihuang Pill, Tianwang Buxin Pill, and Huanglian Ejiao Decoction can be selected to nourish kidney essence, supplement kidney Yin, and help kidney water ascend to nourish heart fire. At the same time, herbs that clear heart fire, such as Dengxin Cao, Zhizi, and Lianzixin, can be used in combination to harmonize the heart and kidneys and restore their normal interaction. Zhu Xiaohong^[31] selected 40 patients with insomnia due to climacteric syndrome from a gynecological clinic. They were treated with modified Huanglian Ejiao Decoction, taken once a day, and decocted in water, twice a day, with 14 days as one course of treatment. After continuous treatment for 2–3 courses, patients were able to sleep for more than 6 hours every night, and symptoms of restlessness, irritability, and facial flushing were reduced. Dong Xueshan^[32] used Chaihu Guizhi Ganjiang Decoction combined with Liuwei Dihuang Pill to effectively improve patients' mental symptoms, thereby relieving insomnia and improving patients' quality of life, which is worthy of clinical promotion.

3.3 Changes in liver wood and heart fire: Clearing liver fire, calming the heart and tranquilizing the mind

Wood and fire have a mutual generation relationship. When the liver fire is too strong, it disrupts the normal function of the liver, which can affect heart fire and lead to its hyperactivity. This can disturb the mind and cause insomnia. Given the mother-child relationship between liver fire and heart fire, methods such as soothing the liver and reducing fire, calming the mind, and stabilizing the will can be adopted to assist the liver in its dispersing function and promote blood circulation in the heart. This can alleviate emotional fluctuations caused by

hormonal changes in menopausal women, which may lead to liver Qi stagnation. Prolonged stagnation can turn into fire, causing evil fire to disturb the mind and lead to symptoms such as insomnia and dream-disturbed sleep. Prescriptions such as Longdan Xiegan Decoction, Chaihu Jia Longgu Muli Decoction, and Jiawei Xiaoyao Pill can be selected. Herbs such as Longdancao, Huangqin, and Zhizi can be used to clear liver fire; Mutong and Cheqianzi can be used to promote urination and clear heat; Chaihu can enter the liver meridian and soothe the liver to relieve qi stagnation; Danggui and Shengdi can enter the liver and heart meridians, nourish the blood, nourish Yin, and soften the liver. Assisted by Gancao to harmonize the middle, or combined with Longgu and Muli to calm the heart and tranquilize the mind, the balance of Yin and Yang can be adjusted, allowing the mind to be calmed and improving insomnia symptoms. Wang Quanhui *et al.*^[33] conducted a randomized controlled trial and concluded that Chaihu Jia Longgu Muli Decoction has a significant effect on treating menopausal insomnia, improving sleep quality, and reducing disease symptoms. Pan Xue *et al.*^[34] studied 130 patients with menopausal insomnia of liver qi stagnation type. The application of Chaihu Jia Longgu Muli Decoction subtraction effectively improved patients' hormone levels and sleep quality, achieving significant results.

4.4. Transformation of heart-fire and lung-metal: Reinforcing Qi and elevating Yang, tonifying and regulating the heart and lungs

There is a mutually inhibitory relationship between Fire and Metal. The heart governs blood vessels, while the lungs govern Qi. However, in pathological states, when Lung-Metal becomes excessively strong, it can inversely restrain Heart-Fire, preventing it from warming the Lung-Metal. This can lead to insufficient lung Qi, poor circulation of Qi and blood, and malnutrition of the mind, manifesting as symptoms of cardiopulmonary Qi deficiency such as palpitations, shortness of breath, insomnia, and fatigue. Since the heart and lungs are adjacent to each other and functionally interrelated, with the lungs aiding the heart in circulating blood, it is necessary to treat both organs simultaneously. Remedies such as modified Bufe Decoction combined with

Baoyuan Decoction, Sancai Decoction, and Renshen Yangrong Decoction can be used, possibly complemented with nourishing Yin herbs like *Ophiopogon japonicus* and *Schisandra chinensis*. By nourishing the Qi and Yang of the heart, lungs, and kidneys, the goal is to treat injuries to both Yuan Qi and Yin fluids. According to Lv Yingying's^[35] randomized controlled study on 68 patients with insomnia due to deficiency of both Qi and blood, Renshen Yangrong Decoction significantly improves insomnia symptoms, enhances quality of life, and is safe, painless, and has minimal side effects, making it worthy of clinical promotion and application.

4.5. Transformation of kidney-water and liver-wood: Nourishing the kidneys and liver, cultivating Yin and subduing Yang

There is a generative relationship between Water and Wood. The kidneys are the foundation of prenatal constitution, containing true yin and accommodating true Yang. The kidneys store essence and generate the body's vitality, while kidney essence gives rise to Yin and Yang. The Yin and Yang of the five organs cannot be nourished without the support of kidney Yin and Yang. The liver is responsible for dispersion and storing blood, and it is crucial for the abundant Qi and blood in the Chong and Ren meridians. Women naturally prioritize the liver due to the depletion of essence and blood caused by menstruation, pregnancy, childbirth, lactation, and other factors, leaving an excess of Qi. Women's bodies are based on blood, and their functions rely on Qi. Their constitution is Yin, but their functions are Yang. Therefore, menstrual syndrome-related insomnia is often associated with imbalances in the harmonization of Qi and blood in the liver. When kidney water fails to nourish liver wood, the generation of Yin and Yang in the liver and kidneys becomes deficient. If one aspect of Yin and Yang becomes excessively dominant, deficiency of defensive Yang and dysregulation of the skin's pores can manifest as "spontaneous sweating" or "night sweats." Women tend to be more contemplative and emotionally affected. Disharmony of Qi due to liver dysfunction can lead to liver Qi stagnation and transformation into fire. Over time, this consumes the Yin of the liver and kidneys, and deficient fire disturbs the heart, forcing fluids to leak out, manifesting as symptoms of menopause

such as hot flashes, irritability, insomnia, and excessive sweating. Treatment should focus on nourishing Yin and subduing Yang, enhancing kidney water nourishment to restrain liver wood hyperactivity. On the basis of nourishing kidney Yin, it is also necessary to tonify liver blood, nourish the heart, and calm the mind to harmonize the Yin and Yang in the kidneys, bringing the body into a state of Yin-Yang balance. Remedies such as Qiju Dihuang Pill, Zuogui Pill, and Yiguan Jian can be used, possibly complemented with herbs like *Anemarrhena asphodeloides* to nourish Yin and reduce fire, *Phellodendron amurense* to clear heat and purge fire, *Albizia julibrissin* to soothe the liver and dispel stagnation, and *Lycium barbarum* to nourish the kidneys and liver. These treatments address both the liver and kidneys, clear heat, nourish Yin, tonify the kidneys, and fill essence, simultaneously treating symptoms like hot flashes, night sweats, soreness and weakness of waist and knees, and fundamentally relieving insomnia. Guo Qun's ^[36] study applied a combination of Suanzaoren Decoction and Zuogui Pill to treat female patients with insomnia during menopause, demonstrating improvement in associated symptoms and enhanced treatment effectiveness. Fan Mingsheng's ^[37] randomized controlled trial found that the combination of Qiju Dihuang Pill and Losartan Potassium Tablets had significant effects in treating patients with insomnia and hypertension during menopause, effectively improving their sleep quality, making it worthy of promotion.

4.6. The interaction between liver (wood) and spleen (earth): Soothing the liver and regulating Qi, strengthening spleen and harmonizing the stomach

In traditional Chinese medicine theory, there is a restraining relationship between wood and earth elements. When the Qi of the liver (represented by wood) becomes excessive, the liver's dispersing function becomes abnormal, excessively restricting the spleen (represented by earth). This can lead to disorders of the spleen and stomach, further affecting the biochemical process of Qi and blood, and causing insomnia. Methods such as soothing the liver, strengthening the spleen, calming the mind, and stabilizing the will can be adopted. By promoting the liver's dispersing function to assist the

spleen's transportation and transformation, it helps alleviate emotional fluctuations caused by hormonal changes in menopausal women. In this process, if liver Qi stagnation persists, it will restrict the spleen, causing spleen dysfunction and leading to insufficient biochemical generation of Qi and blood. This deprives the mind of nourishment, resulting in insomnia and vivid dreams. In such cases, the treatment principle should be to soothe the liver, strengthen the spleen, and harmonize the liver and spleen. Therapeutic prescriptions such as Jieyu Anshen Tang (Decoction for Relieving Depression and Calming the Mind), modified Xiao Chai Hu Tang (Minor Bupleurum Decoction), and modified Si Jun Zi Tang (Four Gentlemen Decoction) can be used for treatment. In terms of medication selection, Chai Hu (Bupleurum) can exert the effect of soothing the liver and relieving depression, restoring the liver's dispersing function and preventing excessive restriction on the spleen. Bai Zhu (Atractylodes) and Fu Ling (Poria) can strengthen the spleen and benefit Qi, ensuring a source of Qi and blood generation to nourish the mind. Dang Gui (Angelica) and Bai Shao (Paeoniae) have the function of nourishing blood and softening the liver, supplemented by Gan Cao (Glycyrrhiza) to harmonize various medications. Additionally, acid jackfruit seed and Yuan Zhi (Polygala) can be combined to calm the mind and stabilize the will. Through such medication combinations, the goal is to achieve a balanced liver and spleen, ensuring sufficient Qi and blood and a peaceful mind, thereby improving insomnia symptoms. Sun Yuanyuan *et al.* ^[38] conducted a randomized controlled trial on 90 patients with liver depression and spleen deficiency type perimenopausal insomnia. They found that Jieyu Anshen Tang can effectively improve sleep quality, perimenopausal symptoms, and TCM syndromes, regulate sex hormone levels, and have no serious adverse reactions. Zhu Huiyan ^[39] used the modified Xiao Chai Hu Tang to treat 42 perimenopausal women with liver depression and spleen deficiency-type insomnia. The clinical efficacy was significant, improving patients' subjective sleep quality, reducing sleep latency, and alleviating symptoms of liver depression and spleen deficiency. This treatment is worthy of clinical promotion and application.

5. Summary

In the five-element theory, the physiological and pathological connections between various organs are closely linked. By analyzing the law of mutual generation and restraint among the five elements, we can deeply understand the impact on the functions of various organs and mental states, especially when diagnosing and treating insomnia issues related to climacteric syndrome. For example, the liver belongs to wood while the heart belongs to fire, and the liver (wood) promotes the heart (fire). Therefore, it is necessary to be vigilant about the pathological state of the liver affecting the heart, and emphasis should be placed on soothing the liver to assist the heart's blood circulation during treatment. Similarly, the heart (fire) promotes the spleen (earth), so it is necessary to prevent heart problems from affecting the spleen, which is known as "child disease affecting the mother." Thus, treatment should focus on soothing the liver to assist the heart in blood circulation, strengthening the spleen and benefiting Qi to achieve harmony between the heart and spleen. The kidney (water) generates the

liver (wood), so it is essential to nourish Yin and subdue Yang to soothe the liver and relieve depression. The kidney belongs to water, the heart belongs to fire, and water can control fire. Therefore, attention should be paid to the mutual influence of heart and kidney functions, and the Yin-Yang balance between the two should be adjusted. The lung belongs to metal, the heart belongs to fire, and metal can control fire. Hence, it is important to pay attention to the coordination of cardiopulmonary function and the smooth flow of Qi and blood. The liver belongs to wood, and the spleen belongs to earth. Wood can restrain earth, during treatment, attention should be given to strengthening the spleen and harmonizing the liver to prevent damage to the spleen and stomach, which affects the biochemical generation of qi and blood. Applying the five-element theory to the diagnosis and treatment of insomnia related to climacteric syndrome demonstrates the application of the holistic view and macro thinking of traditional Chinese medicine in the treatment of specific diseases. This highlights the uniqueness and advantages of clinical thinking in traditional Chinese medicine.

Disclosure statement

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