

Current developments in Traditional Chinese Medicine for managing insomnia

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Abstract

Insomnia is a common issue in modern society, and the decrease in sleep quality can have a serious impact on individuals' daily life, work, and study. While western medicine shows short-term effectiveness in treating insomnia by alleviating symptoms quickly, it may lead to potential adverse reactions like emotional disturbances, depression, and anxiety in the long term, making prolonged treatment unfeasible. On the other hand, traditional Chinese medicine adopts a holistic approach with syndrome differentiation and treatment, mainly using traditional Chinese remedies along with acupuncture and moxibustion to restore the body's Qi, blood, Yin, and Yang balance, resulting in fewer side effects and sustainable positive outcomes. This article will delve into the causes, mechanisms, and therapeutic approaches for insomnia through the lens of traditional Chinese medicine, highlighting its strengths in addressing this sleep disorder.

Keywords

Insomnia; Chinese medicine treatment; research progress.

1. Introduction

The act of sleeping is vital for the normal functioning of human activities and is indispensable for sustaining life and promoting overall health. In today's world, insomnia has become a widespread phenomenon.[1].Insomnia, a common clinical condition, is characterized by difficulty falling asleep, waking up with dreams, or experiencing difficulty staying asleep throughout the night, leading to tiredness and reduced quality of sleep. This impacts daily life, work, and study. In ancient Chinese medicine, it is known as "Sleeplessness" or "No Sleep," among other terms. The incidence of insomnia has been on the rise in recent years. Survey data from both domestic and international sources show an average incidence rate of 30%. [2]. The prevalence of insomnia among young people is increasing, posing a threat to their health. Common treatments in Western medicine include benzodiazepine agonists, antidepressants, sedatives, and melatonin to address sleep issues. However, prolonged use of these medications can lead to negative side effects like agitation, depression, anxiety, leukopenia, and hallucinations. [3-4]. Chinese medicine is known for its lower incidence of side effects and superior long-term outcomes, this paper will concentrate on investigating the causes and progression of insomnia as well as its treatment through the lens of Chinese medicine in order to showcase the advantages of Chinese medicine in managing insomnia.

2. Chinese medicine's understanding of insomnia

2.1. History of successive generations

Insomnia has been called "sleeplessness", "not lying down", "not sleeping", "not closing the eyes" and so on in traditional Chinese medicine texts. Chinese medical texts of all generations have discussed it. The "Miraculous Pivot - Kou Wen" records: "Wei Qi day line in the Yang, night line in the Yin, Yin main night, the night sleep Yang Qi exhaustion, Yin Qi is full of rest, Yin Qi exhaustion Yang Qi is full of sleep"; "Miraculous Pivot - Da Huolun" said: "Wei Qi shall not enter

the Yin, often stay in the Yang. Yin, often stay in the Yang. Stay in the Yang is full of Yang Qi, Yang Qi is full of Yang stilt Sheng; not into the Yin is Yin Qi virtual, so the eyes do not close." Pointed out that Yin and Yang do not communicate, disharmony between Ying and Wei and insomnia is the general pathogenesis, this time the Wei Qi line in the Yang and not into the Yin, the formation of the Yin cannot be convergence of the Yang, Yang floated in the outside of the lead to cannot sleep peacefully. In the "Shanghan Zabing Lun", there is "Shaoyin disease, more than two or three days after the onset of the disease, the heart is disturbed and cannot lie down, Huanglian Ejiao decoction is the master of the disease", and "deficiency labor is disturbed and cannot sleep, Suanzaoren decoction is the master of the disease", which points out that the deficiency of Yin and the insufficiency of liver and Yin lead to the pathogenesis of insomnia and the prescription of the medicine. "Jingyue Quanshu-Insomnia" said: "although the disease is not one, but only to know the evil and positive two words is all the carry forward Peace of Shen leads to sleep, restlessness leads to sleeplessness." Pointing out the relationship between human sleep and "heart", "spirit" and "brain", summarizing the pathogenesis of insomnia.

2.2. Etiology and pathogenesis

The "Yellow Emperor's Canon of Internal Medicine" considers that Yin and Yang do not intermingle, Ying and Wei do not harmonize, and that Yang is not in the Yin as the main mechanism of insomnia, and the "Lei Zheng Zhi Cai - Discussion and Treatment of Insomnia" says, "Yang Qi is automatic, and the stillness of the sleep; Yin Qi from the stillness of the movement of the awake." Yang moves from stillness to movement makes a person awake, and Yang moves from movement to stillness makes a person sleep soundly. In later times, the etiology and mechanism of insomnia and its theoretical system were continuously improved. Wang Honghan in the late Ming and early Qing dynasties and Wang Qingren in the Qing dynasty pointed out that all sleep and wakefulness are dominated by the brain, and discussed the mechanism of insomnia from the theory of the brain hidden spirit, which broadened the thinking of the later generations of the treatment of insomnia [5]. Therefore, this disease is located in the brain and is related to the heart, liver, spleen and kidney. The onset of the disease is both slow and urgent, and the disease caused by intense emotional stimulation is urgent, while the disease caused by long-term emotional upset, fatigue, and physical weakness is slow. Pathology is divided into deficiency and solidity, including deficiency of Yin and blood, deficiency of the heart and spleen; solid evidence of liver depression, Yin deficiency and fire, phlegm and heat internal disturbance, deficiency and solid can be transformed into each other, forming mixed evidence of deficiency and solid. In short, the etiology of insomnia is complex, and can be summarized as feeling external evil, emotional and emotional disorders, dietary disorders, prolonged illnesses, internal injuries, phlegm and stagnation and other factors [6]. The specific etiology and pathogenesis are discussed in the following aspects.

2.2.1. Feeling external evil

The "Jingyue Quanshu - Insomnia" said: "its so disturbed, one by the disturbance of the evil Qi, one by the insufficiency of Ying Qi ear; there is evil Qi more solid evidence, no evil Qi are all false evidence." Zhang Jingyue that the cause of insomnia and the external evil related, but also with their own insufficiency. The cause of insomnia is caused by cold, wind and malaria, and the cause of one's own insufficiency is the products of pathology, such as phlegm, fire, cold, dampness, and deficiency of the body. When the surface guard is not solid, after feeling wind and cold, the positive and evil fight and have fever, malignant cold, wind-cold or wind-cold depression and heat disturbing the brain and spirit, resulting in Yin and Yang do not intermingle, Yang is difficult to enter the Yin of the difficulty in falling asleep, or waking up early, and so on. In addition, Zhang Zhongjing believed that the evil guest viscera will affect the operation of Ying and Wei, and if Ying and Wei are out of order, insomnia will occur, and the treatment is based on the theory of deficiency, and the treatment is based on diarrhea and

replenishment of the deficiency, and dispelling the evil and supporting the correctness of the body is appropriate. Professor Lu Zhizheng focus on the seasonality of the disease and according to the characteristics of the four seasons to establish the treatment [7], such as summer evil is easy to injure the Yin part of the treatment should be clear heat and Qi; if external summer dampness should be aromatic and turbid spleen and dampness; if the spring sensation of evil should be dredged through the solar meridian Qi; if the external dryness and heat injuries to the lungs should be clear dryness and moistening of the lungs; if the patient's ordinary weakness and external wind and cold should be beneficial to the Qi and solidifying the surface, and regulating the Ying-Wei. "Clinical Guide to Medical Cases" said: "If due to external evil and do not sleep, such as typhoid fever and malaria and other outbreaks, Ying and Wei must be stifled, lifting and lowering is bound to be out of order, sadness and moaning, day and night difficult to rest, when the speed of the evil, busting the external that is, so that the internal is also safe." In general, the treatment of insomnia caused by the feeling of external evils can be summarized by the phrase "to make external and internal peace".

2.2.2. Emotional disorders

The five emotions can all lead to dysfunction of the internal organs, Qi disorders, Yin and Yang do not communicate, and lead to insomnia. Emotional discomfort, liver depression, liver gas is not as good as the liver Qi excretion, or liver Qi excretion is too much, Yang heat disturbing the brain's spirit, spirit restlessness insomnia, such as the "Discriminatory Record - Door of Insomnia" said: "the gas depression for a long time, the liver Qi is not comfortable, the liver Qi is not comfortable, then the liver blood will be consumed, the liver blood is consumed, then the blood in the wood, the blood, on the heart is not moist, then sleeplessness." Liver Qi sparing disorder will also affect the liver blood storage function, if the liver does not store blood, then the spirit is not nourished, resulting in insomnia, modern people's work and study pressure, so the liver Qi uncomfortable is the most common, the most important pathological factors of insomnia [8]; or liver fire disturbing the heart fire, the heart fire is hyperactive, cannot be handed over to the kidneys, the heart and kidneys are not communicating with each other, the heat disturbed the spirit so that the spirit and minds are not peaceful and insomnia; or too much joy and anger, the spirit is disturbed and insomnia; if the excessive alarm and panic. If the heart and kidneys are harmed by excessive panic, resulting in insomnia when the heart is weak and timid, then insomnia occurs. For example, "Shen's Zunshengshu - Insomnia" says, "The heart and gallbladder are timid, easy to be frightened, dreaming many ominous dreams, and sleeping a lot in vain." "Leizheng Zhicai" - insomnia" said: "Panic and injury to spirit, the heart is weak and restless." Or overthinking, spleen Qi weakness, transport and transformation disorder, heart blood biochemical lack of source, then the heart and spleen deficiency, heart blood insufficiency to glorify and nourish the gods, resulting in insomnia, such as "Jingyue Quanshu - insomnia" said: "tiredness, thinking too much, will lead to the blood depletion of death, the gods and souls have no master, so insomnia."

2.2.3. Dietary irregularities

"Suwen - Nitiao Lun" said: "Disorder of the stomach leads to insomnia with restlessness". Pointed out that the diet, food stagnation in the middle Jiao gastric viscera, gastric gas and disharmony, the body's Qi and elevation disorder, gastric Qi to drop and, if the gastric Qi does not drop, the counter-riser rushes to the heart, so that the heart and spirit restlessness insomnia [9]. Or food stagnation, brewed as phlegm heat, curbed in the middle Jiao gastrointestinal, phlegm heat on the disturbance of the heart and spirit or obscured the brain orifices, so that cannot sleep well [10].

2.2.4. Internal injuries due to prolonged illness and fatigue

Insomnia can also be caused by prolonged illness, overwork and depletion of Qi and blood, or insufficiency of heart and blood due to deficiency of Qi and blood in old age, and loss of

nourishment for the heart [11]. Or deficiency of liver and kidney, Yin does not contain Yang, or Yin does not control Yang, false fire, brain and spirit are disturbed and cause insomnia.

2.2.5. Phlegm and stasis obstruction

Phlegm stasis is both a pathogenic factor and a pathological product, hindering the intersection of Yin and Yang [12]. "Jingyue Quanshu-insomnia" asked: "fire blazing phlegm and cause insomnia is much more." Wang Qingren pointed out in the "Yilin Gaicuo": "insomnia is an evidence of Qi and blood stagnation" if: "night sleep cannot, with the tranquility of the blood does not work, can be used to treat with Xuefu Zhuyu decoction". Professor Song Jun that phlegm stasis can block the meridians, internal organs [13], as well as Qi and blood, blocking the Qi, obscuring the orifices, disturbing the heart and spirit and lead to insomnia, clinically intractable insomnia is mostly due to phlegm stasis.

3. Traditional Chinese Medicine (TCM)

3.1. Empirical evidence

3.1.1. Type of liver qi stagnation

Liu Ruifen et al. used add and subtract the Chaihu Shugan San to treat liver-Qi stagnation type insomnia [14], and the total effective rate of the observation group of Chaihu Shugan San combined with western medicines was significantly higher than that of the western medicine control group after treatment. Lv Shuting et al used Anshen decoction to treat insomnia of liver depression and Qi stagnation type [15], and the results after treatment showed that the total effective rate of the traditional Chinese medicine treatment group was higher than that of the western medicine control group.

3.1.2. Type of liver depression turns into fire:

Ruan Juanjuan et al. treated insomnia of liver depression turns into fire type by using Anshen Jieyu Wan [16], 135 patients were randomized into control groups, and the total effective rate of traditional Chinese medicine treatment in the observation group was 97% after treatment, and the total effective rate of western medicine treatment in the control group was 88%, which made the therapeutic efficacy of traditional Chinese medicine treatment extremely significant.

3.1.3. Type of phlegm-heat attacking internally:

Cai Zhiguo et al used Huanglian Wendan decoction to treat 30 patients with insomnia of the phlegm-heat internal disturbance type [17], and the results showed that it could increase the levels of 5-HT, GABA, and NE in the serum of the patients, decrease the levels of DA, and improve the sleep duration of the patients, etc, so as to improve the quality of sleep;

3.1.4. Type of phlegm and blood stasis obstruction

Prof. Han Zucheng pointed out in the treatment of phlegm and blood stasis blockage type insomnia that [18]: phlegm-based formula to choose Er Chen decoction, and blood stasis-based formula to use the Xuefu Zhuyu decoction, and the identification of evidence-based treatment, the acute treatment of the symptoms, slow treatment of the root of the problem, the clinical efficacy of significant.

3.2. Evidence of deficiency

3.2.1. Type of deficiency of both the heart and spleen

Lin Na treated 126 cases of heart-spleen deficiency insomnia patients with the combination of Guipi decoction and dexzopiclone [19], and found that the total effective rate of the combined Chinese and Western medicine treatment group was significantly higher than that of the Western medicine control group. The serum 5-HT and GABA levels of the combined Chinese and Western medicine treatment group were also significantly higher than those of the Western

medicine control group; the serum DA level and PSQI index of the combined Chinese and Western medicine treatment group were significantly lower than those of the Western medicine control group; and the adverse reactions of the patients of the combined Chinese and Western medicine treatment group during the period of treatment were significantly lower, which indicated that the combination of Guipi decoction with dexzopiclone could significantly improve the sleep quality of patients with heart-spleen deficiency-type insomnia.

3.2.2. Type of deficiency of heart-QI and gallbladder-QI

Dong Hongli used AnshenDingzhi Wan to treat insomnia and oral eszopiclone to treat insomnia, and the total effective rate of the traditional Chinese medicine group was significantly higher than that of the western medicine control group after treatment [20].

3.3. Mixing of deficiency and reality

3.3.1. Type of Heart-kidney disjunction

Liang Shengnan and others treated 64 patients with heart-kidney disjunction-type insomnia by using internal Jiaotai Wan combined with three parts and four needles of Zhuang medicine [21], the total effective rate of the treatment group was 96.67%, and the total effective rate of the control group was 80.65%, and the therapeutic efficacy of internal Jiaotai Wan combined with three parts and four needles of Zhuang medicine in the treatment of heart-kidney disjunction-type insomnia was concluded to be remarkable after the treatment.

3.3.2. Type of Liver Depression and Spleen Deficiency

Prof. Jia Yuejin made good use of Xiangsha Liujunzi decoction to regulate the Qi of spleen and stomach to treat insomnia of the type of liver depression and spleen deficiency, which has the function of strengthening the spleen and benefiting the Qi [22], moving the Qi and removing dampness.

4. Other Chinese medicine treatment

Chinese medicine treatment of insomnia in addition to the common traditional soup, there are acupuncture and other special therapies, acupuncture treatment has fewer side effects, is beneficial to the patient's immediate and long-term recovery role, for the treatment of patients with severe insomnia has a positive significance, acupuncture by needling acupuncture points to stimulate the brain's nervous system to produce an excitatory or inhibitory state, to regulate excitatory-inhibitory neurotransmitter expression of the dynamic equilibrium [23]. Prof. Hu believes that the main pathology of insomnia is the hyperawareness of spirit [24], the spirit cannot be hidden, usually take the points for Baihui, Yintang, Shenmen, Neiguan; regulation of Yin and Yang is often selected Jingming, and with moxibustion of the Ren-Du Chakra related points for the treatment of insomnia. Zeng Tong and other people treat the insomnia in the heart and spleen deficiency type of insomnia by taking Baihui [25], Shenmen, Neiguan, Pishu, Xinshu, Sanyinjiao, and Anmian with moxibustion of the "Yinbai", and the therapeutic effect on insomnia has improved significantly. Zhang Wei et al. [26] treated acupuncture from the liver theory, and the improvement of sleep disorders, anxiety, depression, and perimenopausal symptoms were better than oral eszopiclone alone. Acupuncture treatment by dredging the meridians and collaterals of the diseased viscera, so that the Qi runs smoothly, then the viscera can be moistened.

5. Conclusion

In modern life, people's stress, fast pace, insomnia phenomenon is frequent, people's normal work, study will be seriously affected, modern medicine generally use antidepressant drugs, sedative drugs and so on the treatment of insomnia, short-term effect is more obvious, but long-

term use of such drugs will bring about toxic side effects, traditional Chinese medicine for the treatment of insomnia has a unique advantage, the etiology of insomnia is complex and diverse, so different scholars have different insights into its etiology and mechanism analysis as well as evidence-based treatment, and the therapeutic effect is significant, low cost, side effects are less. The etiology and mechanism of insomnia are complex and varied, so different scholars have different opinions on the analysis of its etiology and mechanism as well as the treatment based on evidence, and have accumulated rich experience, and the therapeutic efficacy is remarkable, the cost is low, and the side-effects are relatively small, and the treatment methods of traditional Chinese medicine and acupuncture, tui-na and other methods of treatment are worthy of being popularized in the clinic. Modern medical doctors also continue to develop and innovate, and make further contributions to the research on the treatment of insomnia by traditional Chinese medicine.

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