

Research Progress of Traditional Chinese Medicine Treatment of Insomnia

Yawen Guo^{1,a}, Li Wang^{1,b}, Wenwen Zhang^{1,c}, Ling Wang^{2,d,*}

¹Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, 712046, China

²Shaanxi Provincial Hospital of Traditional Chinese Medicine, Xi'an, Shaanxi, 710003, China

^a1611278770@qq.com, ^b2241919246@qq.com, ^c2249570632@qq.com, ^dxianyiyi@126.com

*Corresponding author

Abstract: With the rapid development of society and the increase of human pressure, the occurrence of diseases has become more common. Insomnia is gradually known as a common clinical disease. The occurrence of insomnia is gradually unrelated to age, and the incidence rate is increasing year by year. Insomnia brings a heavy burden to human life and work, and even causes other diseases. Therefore, it is necessary to treat insomnia efficiently. Western medicine believes that insomnia is a disorder of the sleep cycle, which may change the sleep phase due to external factors. The treatment method is mainly based on taking western medicine, but the patients have most adverse reactions in clinical practice and low acceptance. Traditional Chinese medicine believes that insomnia is a change in sleep caused by the imbalance of yin and yang and qi and blood. There are various pathological factors and many treatment methods. In clinical practice, patients have less discomfort and high acceptance. Therefore, this paper is based on the treatment of insomnia in traditional Chinese medicine, and strives to prove the therapeutic effect of traditional Chinese medicine on insomnia.

Keywords: Insomnia; Chinese medicine treatment; Review; Research progress

1. Introduction

Insomnia is a sleep disorder, mainly refers to the long-term poor quality of sleep, such as short sleep duration, sleep easy to wake up or difficult to fall asleep state^[1]. Insomnia is a subjective feeling of the human body^[2]. It is also one of the common diseases in modern clinical practice. Insomnia has a great negative impact on patients' work and life. Some researchers have found that the number of insomnia is increasing year by year. In China, the age of insomnia patients tends to be younger. In many studies, the number of insomnia cases in young people is increasing^[3]. Researchers have found a two-way correlation between insomnia and anxiety and depression, as shown in Figure 1. Long-term insomnia increases the risk of anxiety and depression^[4]. In addition, researchers have also found that long-term insomnia can also be associated with hypertension^[5], cognitive disorder^[6], stroke^[7]. Therefore, the treatment of insomnia can not only improve the quality of daily life of patients, but also reduce the occurrence of some complications. Western medicine has a certain understanding of insomnia. The mechanism of insomnia in Western medicine is not clear. At present, the over-awakening hypothesis and the 3P hypothesis are more recognized^[7]. In terms of medication, western medicine uses benzodiazepine receptor agonists, antidepressants, sedative drugs, etc. to exert sedative and hypnotic effects, thereby improving the sleep quality of patients^[8]. However, many patients with long-term use of western medicine have adverse reactions such as cognitive dysfunction, memory loss, drug dependence, and repeated illness^[9]. Insomnia is called 'bumei' in traditional Chinese medicine. The understanding of insomnia in traditional Chinese medicine is described as early as thousands of years ago in the book 'Huangdi Neijing': stomach disharmony is restless. This sentence is to explain that if the spleen and stomach are damaged, it will affect sleep. Traditional Chinese medicine believes that insomnia is related to liver, heart, spleen, lung and kidney. The pathogenesis of insomnia is the imbalance of yin and yang, which leads to the imbalance of yin and yang^[10]. Traditional Chinese Medicine categorizes insomnia into five syndrome types, and the corresponding prescriptions are shown in Figure 2. Therefore, the treatment of insomnia in traditional Chinese medicine starts from regulating the balance of yin and yang, so as to regulate the viscera, remove the pathological products, improve qi and blood, and finally promote the patient to 'lie down'. Traditional Chinese medicine treatment methods are various, including traditional Chinese medicine, acupuncture, massage, acupoint application and other treatment methods, and these methods have small side effects, long-lasting efficacy, and high economic applicability, which

are readily accepted by patients. This article proves the effectiveness of traditional Chinese medicine in the treatment of insomnia by summarizing three methods of treating insomnia in a large number of literatures, such as traditional Chinese medicine, acupuncture and moxibustion, and acupuncture combined with medicine.

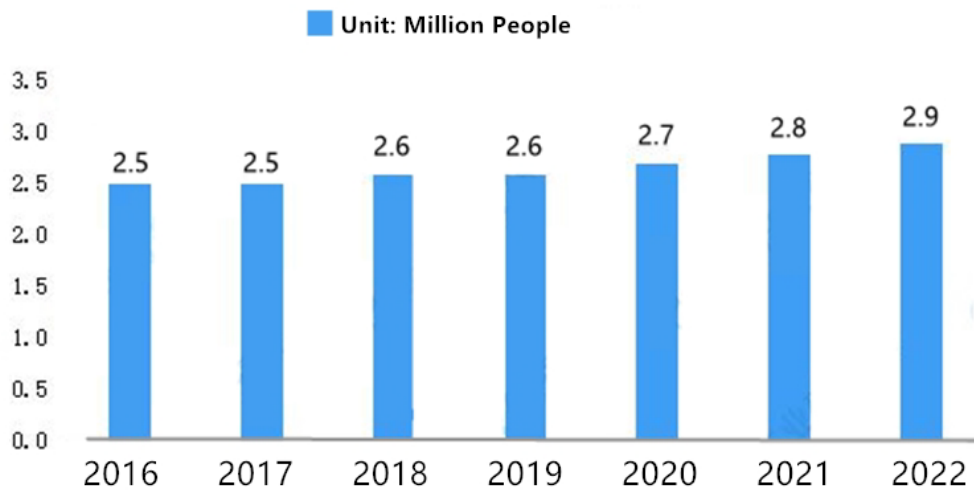


Figure 1: The number of adult patients with insomnia in China from 2016 to 2022

Phlegm-heat Harassing Heart Type	Longdan Xiegan Decoction
Liver Fire Disturbing Heart Type	Huanglian Wendan Decoction
Heart-spleen deficiency Type	Guipi Decoction
Heart-kidney Disharmony Type	Liuwei Dihuang Pill & Jiaotai Pill
Qi Deficiency of Heart-gallbladder Type	Anshen Dingzhi Pill & Suanzaoren Decoction

Figure 2: Traditional Chinese Medicine syndrome types and prescriptions of insomnia

2. Chinese medicine treatment of insomnia

Traditional Chinese medicine is a good prescription for ancient doctors to explore the treatment of diseases. They have tasted many herbs in China and verified the therapeutic effect of herbs with life. These experiences of traditional Chinese medicine treatment have been continuously applied to clinical practice and recorded in medical books by future generations of doctors, and have continued to this day. Modern medicine is skillfully combined with science and technology and traditional Chinese medicine, and provides scientific basis for the treatment of diseases with traditional Chinese medicine. Li Yujie et al. ^[11] took 50 experimental rats as experimental subjects, and gave a certain dose of western medicine and traditional Chinese medicine to the concentrated decoction of Liuwei Anshen Decoction at the specified time. After the experiment, the researchers found that the sleep duration of the rats injected with traditional Chinese medicine decoction was prolonged, and the neurotransmitter content was significantly improved. Xiong Wei et al. ^[12] collected dialysis insomnia patients with heart-kidney disharmony in the hospital, and treated the patients with Jiaotai Pill, a traditional Chinese medicine prescription composed of Rhizoma Coptidis and Cortex Cinnamomi, combined with dialysis. After a period of treatment, it was found that the insomnia symptoms of the patients were alleviated, the quality of insomnia was improved, and the levels of TNF- α and BDNF in serum were significantly improved. Suanzaoren Decoction is one of the classic prescriptions for the treatment of insomnia. Ran Gusheng ^[13]

found that the combination of Suanzaoren Decoction and acupuncture can effectively treat perimenopausal women with insomnia. After clinical trials, he concluded that the female hormone levels treated with this method were effectively improved compared with those before treatment, and the adverse reactions were less, and the duration of sleep after treatment was also prolonged. Qiao et al. ^[14] believed that the most closely related organs to insomnia are liver and spleen, so they pay attention to soothing liver and regulating spleen in the treatment of insomnia patients. He used Sijunzi Decoction and Sini Powder to treat insomnia patients with liver depression and spleen deficiency, and combined with acupoint application. The treatment results showed that the patient's insomnia symptoms improved, and the syndrome score of insomnia decreased, indicating that traditional Chinese medicine combined with acupoint application had a therapeutic effect on insomnia. Xiao Yongjuan ^[15] used Guizhi decoction combined with Suanzaoren decoction to treat 30 insomnia patients. On the basis of oral Chinese medicine, they were treated with traditional Chinese medicine foot bath. After treatment, the researchers found that the patients' Pittsburgh sleep quality index scale and pworth sleepiness scale scores improved, and the state of anxiety and depression improved. Wang Yifan et al. ^[16] used Wendan Decoction to treat insomnia patients with phlegm-heat syndrome by clearing heat and resolving phlegm. After treatment, it was found that the total effective rate of treatment was 85.7%. The serum neurotransmitter index of patients was improved, which improved blood lipids to a certain extent, reduced the discomfort of patients with insomnia and improved sleep time. It is concluded that the improvement of insomnia by traditional Chinese medicine still plays a great role in modern clinical application.

3. Acupuncture treatment of insomnia

Acupuncture and moxibustion is a general term for the two treatment methods of acupuncture and moxibustion. Through acupuncture and moxibustion, it plays a role in soothing meridians and dredging collaterals in human acupoints, muscle tissues and other parts. Clinically, the combination of the two treatment methods is often used, and the methods of acupuncture and moxibustion are diverse. Li Pengfei ^[17] and others used abdominal acupuncture combined with conventional acupuncture to acupuncture 45 insomnia patients with deficiency of both heart and spleen. The acupoints were Zhongwan, Qihai, Pishu and other acupoints. After 10 days, the Pittsburgh Sleep Quality Index Scale score of the test patients was reduced, suggesting that the patient's sleep after treatment was improved such as difficulty in falling asleep, short sleep duration, and early awakening. Sanyinjiao is the intersection of the qi and blood running pathways of the three yin meridians. Liu Tingting et al. ^[18] used warm acupuncture and moxibustion to act on Sanyinjiao, and auricular point pressing with beans at Shenmen, subcortical and other acupoints. After 6 weeks of treatment, the patient's insomnia and the accompanying symptoms of insomnia were improved, indicating that the combination of warm acupuncture and auricular point pressing with beans can promote the regulation of neurotransmitters and facilitate the regulation of sleep. Shen Bing ^[19] used traditional acupuncture combined with auricular acupuncture to treat 40 insomnia patients. The traditional acupuncture selected Sanyinjiao, Shenmen, Neiguan and other acupoints, and then selected the matching acupoints to adjust the pathological factors according to the clinical syndromes of the patients. The treatment results showed that the sleep efficiency of the patients was improved, and the probability of recurrence of insomnia symptoms was only 5%. Doctor Wang Yunfei ^[20] believes that patients with yang deficiency should be mainly tonifying yang. Therefore, warm acupuncture is applied in the treatment of insomnia patients with yang deficiency. After treatment, the patient's emotional state and sleep quality are improved, indicating that yang deficiency insomnia can effectively regulate the pathological state of yin and yang imbalance through warm acupuncture, and promote the balance of yin and yang. In order to explore the effect of acupuncture and moxibustion on insomnia, Ren Lili ^[21] randomly divided 64 insomnia patients into two groups, one group was treated with acupuncture and moxibustion, and the other group was treated with acupoint injection and chiropractic. The results showed that the symptoms of the two groups were improved, and the symptoms of the patients treated with acupoint injection and chiropractic were improved more obviously. In order to study the therapeutic effect of acupuncture and moxibustion on chronic insomnia, Li Yonghong et al. ^[22] used oxazepam tablets to treat 32 patients with insomnia, and acupuncture points such as Shenmen, Neiguan and Sanyinjiao. The results showed that the symptoms of insomnia in patients treated with acupuncture were alleviated, which was beneficial to the life and work of patients. The above research shows that acupuncture and moxibustion is an effective method for the treatment of insomnia, which can effectively regulate the meridian operation of patients and adjust the cycle of sleep.

4. Acupuncture combined with medicine treatment of insomnia

Both acupuncture and traditional Chinese medicine are effective measures for the treatment of diseases in traditional Chinese medicine. Both have certain advantages and disadvantages, but effective combination in clinical practice can play a more prominent therapeutic role. Long Dihe et al. [23] treated 60 patients with insomnia of liver stagnation and spleen deficiency type with Sini Powder combined with acupuncture and moxibustion. The experimental results showed that the sleep quality of the patients was improved, and the rapid eye movement sleep time and slow wave sleep time were increased. Zhan Jiaxian et al. [24] using acupuncture points such as Taichong and Hegu combined with Suanzaoren Decoction to treat patients with insomnia after stroke, they concluded that this method can alleviate the insomnia-related clinical symptoms of stroke patients. Acupuncture plays the role of promoting blood circulation and replenishing qi, while Suanzaoren Decoction plays the role of nourishing yin and tranquilizing the mind. Some researchers [25] divided 80 patients with insomnia into two groups. One group was treated with Xuefu Zhuyu Decoction and acupuncture, and the other group was treated with simple western medicine estazolam tablets. After treatment, the researchers found that the quality of life and sleep of this group of patients treated with traditional Chinese medicine and acupuncture were significantly improved. In the treatment of perimenopausal insomnia patients, Lu Yi et al. [26] were good at applying acupuncture combined with medicine, using Baizi Yangxin Decoction and acupuncture for treatment. The results showed that the hormone level of the patients was improved, which could alleviate the symptoms of perimenopausal insomnia. Ren Bianying et al. [27] used the combination of Qianyang Anshen Decoction and acupuncture to treat insomnia patients with liver and kidney yin deficiency. The results showed that the patient's Pittsburgh sleep index score decreased, indicating that the patient's sleep treatment was mediated, and the anxiety and depression were improved. Dr. Ke Li [28] used Jiaotai Fang acupuncture (Shenshu, Xinshu, Sanyinjiao, Xingjian and other acupoints) plus Qingxin Anshen Decoction (Huanglian, Suanzaoren, etc.) to treat patients with insomnia of heart-kidney disharmony type. After the treatment, the patient's polysomnography index suggested that the sleep quality was improved and the clinical efficacy was excellent. It is concluded that the combination of acupuncture and medicine is one of the effective ways to treat insomnia. Through acupuncture and moxibustion to dredge meridians and collaterals and traditional Chinese medicine to regulate qi and blood to improve the pathological state of yin and yang imbalance in patients, so as to promote sleep.

5. Acupoint application in the treatment of insomnia

Acupoint application is to use traditional Chinese medicine to make plaster on some acupoints of the human body, and use the role of drugs and acupoints to treat the disease. Acupoint application is a non-invasive treatment method, which is simple to operate and easy to treat. Zhou Fan et al. [29] used traditional Chinese medicine *evodia rutaecarpa*, mother-of-pearl and *coptis chinensis* to make acupoint application according to a certain proportion, and instructed patients with different syndromes of insomnia to apply each night. After two weeks, the patient's sleep time was shortened, the insomnia was improved, and there was no obvious adverse reaction. A researcher [30] modeled 162 experimental rats, and used vinegar to adjust different doses of *evodia rutaecarpa* powder to make acupoint application for the treatment of insomnia in rats Shenque and Yongquan points. GABA is a neurotransmitter that reduces neuronal excitation, protects nerves, and has the effect of calming and sleeping. The results of this experiment found that the content of GABA in the hypothalamus, brainstem, and hippocampus of mice increased, which means that acupoint application has a therapeutic effect on the skin penetration of insomnia rats. Chen Liangrong et al. [31] used Buxu Nuanyang Anshen Ointment (Wujiapi, Shouwuteng, Lingzhi, etc.) to treat insomnia with deficiency syndrome, and Qushi Xiehuo Anshen Ointment (Fuling, Heifengteng, Huangbai, etc.) to treat insomnia with excess syndrome. The acupoint paste was applied to Shenmen, Dazhui, Yongquan and other acupoints every night. After treatment, the insomnia symptoms of the patients were alleviated, and the effective rate of treatment reached more than 70 %. Li Xiaomei et al. [32] used Shexiang Baoxin Pills to make acupoint application on Taichong, Xingjian and other acupoints located on the liver meridian of foot Jueyin in patients with insomnia of liver depression transforming into fire. The results showed that the sleep time of patients increased and the clinical symptoms of liver depression transforming into fire were improved, which proved that acupoint application was beneficial to clearing liver and purging fire. Zhou Yan et al. [33] used *evodia rutaecarpa* to add other traditional Chinese medicines according to the changes of patients' syndromes to make acupoint application on Shenmen and Anmian points for 46 elderly patients with insomnia. After the treatment, the sleep time of the patients was significantly improved compared with that before the treatment, and the treatment effect was better than that of the patients without acupoint application. Some researchers [34] used Jingyi Anshen Powder (mainly composed of *Rhodiola*, *Acorus tatarinowii* Schott

and other traditional Chinese medicines) as a material for acupoint application on the insomnia rat model made of p-phenylalanine. The results showed that the sleep condition of the rats was improved, the content of 5-HT and 5-HIAA in the hypothalamus of the rats decreased, while the content of DA and NANE increased. Therefore, acupoint application for the treatment of insomnia is an effective and safe treatment method, through the dual role of acupoints and traditional Chinese medicine to adjust sleep.

6. Tuina treatment of insomnia

Massage is the doctor's use of hands or tools to act on the patient's skin, with a certain degree of strength to achieve muscle tissue or acupoints, can play a role in dredging meridians, regulating qi and activating blood. Yinyang into yin is a kind of traditional Chinese medicine massage concept, that is, through the massage of the two vessels to achieve the balance of yin and yang body state. Yi Lixia et al. [35] used the method of inducing yang into yin to treat insomnia after breast cancer surgery at Baihui, Taiyang, Fengchi and other acupoints. The researchers found that the patients after breast cancer surgery were emotionally unstable and yin and yang were out of balance, and this massage method can induce yang into yin and regulate clinical symptoms caused by yin and yang imbalance. Tan Yuanfei et al. [36] found that depression can cause insomnia, and massage can relieve depression and insomnia symptoms, relieve physical discomfort caused by disease, and regulate emotions. Wei Dongming et al. [37] randomly divided 80 patients with primary insomnia into two groups. One group was treated with the combination of adult massage and pediatric massage, and the other group was only treated with western medicine estazolam tablets. The results showed that the treatment effect of patients taking western medicine was not as good as that of patients in the massage group, and the improvement of insomnia was also different. The abdominal massage is mainly based on the massage of the abdomen. Zhang Hongshi et al. [38] used the method of abdominal massage to massage the Shenque, Zhongwan and other acupoints of the patient. After treatment, the patient's symptoms were found to improve after follow-up, and it was found that the method of abdominal massage can regulate the hypothalamus. In order to prove the effectiveness of massage in the treatment of insomnia, Wang Jing et al. [39] collected 78 insomnia patients for clinical observation. In addition to taking estazolam tablets and psychological counseling, the acupoints of the patient's head and back were massaged. After treatment, the patient's neurotransmitter level was improved, and the patient's response was not significantly uncomfortable. In the treatment of patients with mild to moderate insomnia, researchers [40] used massage (Guanyuan, Shenque, Sanyinjiao and other acupoints) combined with acupuncture (Baihui, Anmian, Zhaohai and other acupoints) to treat patients with mild to moderate insomnia. The experimental results showed that the patient's symptom scores were reduced, the time of falling asleep, the time of awakening, and the sleepiness after awakening were improved, and the serum 5-HT and NE levels were adjusted. It is concluded that massage is a simple, non-invasive and comfortable treatment method. There are almost no adverse reactions in the experiment, and the treatment effect is affirmed by patients and doctors.

7. Summary

Insomnia is a kind of pathological state about sleep, and the age of onset is not limited [41]. This disease is mainly manifested in sleep, but insomnia will be accompanied by a series of other diseases, and the corresponding other diseases will also lead to insomnia. This is one of the unstable factors in human life and work, and it brings many problems in clinical practice due to sleep disorders. With the rapid development of social life, in order to improve the happiness of human life and work, it is becoming more and more important to solve insomnia and regulate the diseases that lead to insomnia or the diseases caused by insomnia. The treatment of insomnia in Western medicine is nothing more than Western medicine, repetitive transcranial magnetic stimulation, EEG biofeedback and other methods [42]. In clinical practice, it is mainly Western medicine treatment, but the majority of adverse reactions, patients are more repulsive to Western medicine, worried about drug dependence, worried about the liver and kidney toxicity of drugs. Traditional Chinese medicine is one of China's precious wealth. From ancient times to the present, traditional Chinese medicine has a deep understanding of insomnia. The experience of treating insomnia is very rich, and the methods are various. In addition to the traditional Chinese medicine, acupuncture, acupuncture combined with medicine, acupoint application mentioned in this article, there are foot bath, ear acupuncture, acupoint injection and so on. Traditional Chinese medicine treatment has the advantages of less adverse reactions, low price, convenient operation and so on. It can be accepted by the majority of patients, and the clinical effective treatment rate is also very high. This paper is to summarize the research on the treatment of insomnia by traditional Chinese medicine, acupuncture, acupuncture combined with medicine and acupoint application, but these studies are mainly

based on review and clinical observation. There is still a lack of a large number of experimental verifications on the mechanism of TCM treatment of insomnia. To prove the effectiveness of TCM in the treatment of insomnia in the world, more and more researchers need to prove it with theory and experiment.

References

- [1] Tan Xiaoning, Wang Miaoran, Wang Xujie, et al. Analysis of the registration status of clinical trials of traditional Chinese medicine in the treatment of insomnia in China [J]. *Chinese Medicine Bulletin*, 2023, 29 (04): 171-175.
- [2] Zhou Huijun, Huang Jian, Bai Changchuan. Clinical application progress of external treatment of traditional Chinese medicine in the treatment of insomnia of liver depression transforming into fire type [J]. *Journal of Liaoning University of Traditional Chinese Medicine*, 2023, 25 (02): 5-9.
- [3] Hao Yanan, Wu Xiaoqing. Research progress on epidemiology and pathogenesis of insomnia in young and middle-aged people [J]. *China convalescent medicine*, 2023, 32 (05): 481-485.
- [4] Li Ruoxi, Zhang Quan, Rao Anqi, et al. Causal association study between insomnia and depression: Mendelian randomization analysis [J]. *Joint Military Medicine*, 2023, 37 (02): 140-143.
- [5] Cai Liang, Liu Zida, Wei Jingran, et al. The correlation between essential hypertension and insomnia and the investigation of TCM syndromes [J]. *Medical theory and practice*, 2023, 36 (03): 369-371+376.
- [6] Zhang Tianyuan, Yang Yingying, Cui Shuke. Research progress on insomnia in traditional Chinese and Western medicine [J]. *Modern distance education of Chinese medicine*, 2023, 21 (10): 196-199.
- [7] Yue Luanyi, Zhang Yongkang. Insomnia with depression, anxiety symptoms of Chinese and western medicine research progress [J]. *New medicine*, 2023, 54 (01): 26-29.
- [8] Guo Yawen, Rui Chen, Wang Li, et al. Research Progress of Traditional Chinese Medicine Treatment of Insomnia [J]. *Journal of Liaoning University of Traditional Chinese Medicine*, 2023, 25 (05): 98-102.
- [9] Luo Fangli, Shen Zhifu, Liao Bonian, et al. Research progress of traditional Chinese medicine in the treatment of sub-health insomnia [J]. *Journal of Qiannan Medical College for Nationalities*, 2022, 35 (03): 232-235.
- [10] Ju Wenxue, Yao Wei. Clinical progress of TCM internal and external treatment of insomnia [J]. *Journal of Liaoning University of Traditional Chinese Medicine*, 2023, 25 (01): 147-151.
- [11] Li Yujie, Peng Huixia, Xia Luyao, et al. Effect of Liuwei Anshen Decoction on monoamine neurotransmitter levels in different regions of brain tissue of insomnia mice [J]. *Chinese Journal of Traditional Chinese Medicine*, 2022, 37 (09): 5323-5328.
- [12] Xiong Wei, Gao Zhi, Wang Jianhua, et al. The effect of Jiaotai Pill prescription combined with conventional treatment on the efficacy and serum TNF- α and BDNF in patients with maintenance hemodialysis insomnia (heart-kidney disharmony syndrome) [J]. *Journal of Pharmacoepidemiology*, 2022, 31 (12): 799-802.
- [13] Ran Gusheng, Wang Yi. Suanzaoren decoction combined with acupuncture treatment of perimenopausal insomnia clinical research [J]. *Henan traditional Chinese medicine*, 2022, 42 (11): 1644-1647.
- [14] Qiao Yun, Xiong Mingfeng, Wang Liqin, et al. Observation on the clinical efficacy of acupoint application combined with Sijunzi Decoction and Sini Powder in the treatment of insomnia with liver depression and spleen deficiency [J]. *Practical integrated traditional Chinese and Western medicine clinical*, 2022, 22 (17): 1-4+8.
- [15] Xiao Yongjuan. Clinical study of Guizhi Decoction and Suanzaoren Decoction combined with timing homeopathic foot bath in the treatment of insomnia [J]. *Henan Traditional Chinese Medicine*, 2022, 42 (10): 1479-1482.
- [16] Wang Yifan, Xing Jia, Wang Jialin, et al. Wendan Decoction in the treatment of phlegm heat syndrome insomnia 28 cases [J]. *Global Chinese Medicine*, 2022, 15 (0): 1251-1255.
- [17] Li Pengfei, Wang Yu, Tula Asimu. Clinical study on abdominal acupuncture combined with traditional acupuncture in the treatment of insomnia with deficiency of heart and spleen [J]. *Chinese Medical Guideline*, 2023, 21 (09): 115-117.
- [18] Liu Tingting, Li Wanlang, Zhang Wenhui, et al. Effect of Sanyinjiao warm acupuncture combined with auricular point pressing beans on insomnia after stroke in the elderly [J]. *Chinese Journal of Geriatrics*, 2023, 43 (04): 858-861.
- [19] Shen Bing. Analysis of the clinical effect of acupuncture combined with auricular acupuncture in the treatment of insomnia [J]. *Wise Health*, 2022, 8 (2): 128-130.
- [20] Wang Yunfei. Efficacy of warm acupuncture combined with auricular point sticking in the treatment of Yang deficiency insomnia [J]. *Chinese Community Physicians*, 2021, 37 (17): 106-107.
- [21] Ren Lili. Clinical study on the treatment of insomnia by acupuncture and moxibustion combined

- with acupoint injection in the treatment of insomnia [J]. *Famous doctor*, 2021, No. 106 (07): 62-63.
- [22] Li Yonghong, Li Hucheng, Wang Jun, et al. *Clinical study of acupuncture in the treatment of chronic insomnia [J]. Systemic medicine*, 2020, 5 (22): 136-138.
- [23] Long Dihe, Gang Lili, Cui Xiao, et al. *Effect of acupuncture on slow wave sleep time and rapid eye movement sleep time in patients with insomnia of liver depression and spleen deficiency [J]. Chongqing Medicine*, 2021, 50 (15): 2579-2582.
- [24] Zhanjia Xian, Chen Jian, Wang Juan. *Effect of modified Suanzaoren decoction combined with acupuncture on insomnia after stroke [J]. China Medical Innovation*, 2022, 19 (29): 83-86.
- [25] Lv Xiaorui, Gan Guochao, Liu Guangwan. *Clinical Observation on 80 Cases of Primary Insomnia Treated with Modified Xuefu Zhuyu Decoction Combined with Acupuncture and Moxibustion [J]. Clinical Research of Traditional Chinese Medicine*, 2022, 14 (28): 81-84.
- [26] Lu Yi, Li Chuncheng, Gao Tao, et al. *Baizi Yangxin Decoction combined with acupuncture in the treatment of perimenopausal insomnia [J]. Practical Journal of Internal Medicine of Traditional Chinese Medicine*, 2022, 36 (01): 8-10.
- [27] Ren Bianying, Hao Yan, Luo Qinghua, Deng Xuemei, Huang Ling. *Effect of Qianyang Anshen Decoction combined with acupuncture on insomnia of liver and kidney yin deficiency type and its effect on PSQI score of patients [J]. Chinese community physician*, 2021, 37 (13): 97-98.
- [28] Li Lili. *Jiaotai Fang acupuncture combined with Qingxin Anshen Decoction in the treatment of insomnia with heart-kidney disharmony syndrome [J]. Chinese Medical Journal*, 2020, 35 (09): 2019-2023.
- [29] Zhou Fan, Huang Jianping, Li He, Lin Feifei, Yang Jun. *Clinical study of acupoint application of traditional Chinese medicine on senile insomnia with different syndromes and multiple diseases [J]. New Chinese Medicine*, 2023, 55 (06): 175-181.
- [30] Zhao Qi, Luo Lu, Qiao Yagang, Zhang Junwu. *Study on the penetration process and mechanism of p-chlorophenylalanine insomnia rats in vivo skin by vinegar-adjusted evodia rutaecarpa acupoint application [J]. Chinese Medical Herald*, 2022, 19 (34): 23-28.
- [31] Chen Liangrong, Li Minjie, Jiang Meng, Wang Ping, Chen Xiuchun, Li Haiqiang. *Clinical study on acupoint application of Yao medicine hydrotherapy ointment in the treatment of insomnia [J]. Chinese Journal of National Medicine*, 2022, 28 (10): 35-37.
- [32] Li Xiaomei, Li Yuan, Pan Mingzhi, Huang Canrong, Cai Shuhe. *Taichong and Xingjian acupoint application in the treatment of 31 cases of insomnia of liver depression transforming into fire type [J]. Fujian Traditional Chinese Medicine*, 2022, 53 (07): 53-54 + 57.
- [33] Zhou Yan, Ke Haiyan, Lin Yingchao. *Clinical observation of acupoint application of Wuzhuyu powder in the treatment of senile insomnia [J]. China Science and Technology of Traditional Chinese Medicine*, 2020, 27 (03): 489-490.
- [34] Hu Jinxia, Lu Jun, Wang Hongxia, Jiang Yu, Liu Tao, Hu Xiaoling. *Experimental study on the effect of acupoint application of Jingyi Anshen Powder on neurotransmitters in insomnia rats [J]. Chinese Medical Herald*, 2020, 17 (10): 13-17.
- [35] Yi Lixia, Cao Yuwen, Zhao Zihao. *Observation on the effect of combined intervention of Yang-yin massage and emotional release on improving insomnia in patients with breast cancer after operation [J]. Practical Journal of Internal Medicine of Traditional Chinese Medicine*, 2023, 37 (02): 119-122.
- [36] Tan Yuanfei, Chu Yunjie, Li Xiaochuan. *Massage combined with psychological counseling in the treatment of insomnia caused by depression [J]. Journal of Changchun University of Traditional Chinese Medicine*, 2022, 38 (04): 406-408.
- [37] Wei Dongming, Liu Jingzhen, Li Yan, Chu Rui, Liu Yanling, Wang Zhi. *Efficacy observation of adult massage combined with pediatric massage plus acupoints in the treatment of primary insomnia [J]. Hebei Traditional Chinese Medicine*, 2022, 44 (03): 460-463.
- [38] Zhang Hongshi, Liu Peng, Wu Xingquan, Cheng Kailiang, Zhang Ye, Cong Deyu. *Study on the effect of abdominal massage on hypothalamic activity and serum brain-gut peptide in insomnia patients with heart and spleen deficiency [J]. Shi Zhen Traditional Chinese Medicine*, 2022, 33 (02): 397-400.
- [39] Wang Jing, Liu Xufeng, Xue Weiguo. *Clinical efficacy and safety of TCM massage therapy in the treatment of insomnia [J]. Guizhou Medicine*, 2021, 45 (03): 432-433.
- [40] Zhang Tianyu, Li Tongjun. *Randomized controlled clinical study on the treatment of mild to moderate insomnia by massage combined with transcranial repeated acupuncture [J]. Clinical Journal of Traditional Chinese Medicine*, 2021, 33 (01): 153-157.
- [41] Jia Huifang, Wang Keqin, Jia Xiaokun. *Insomnia with anxiety and depression in Chinese and Western medicine research progress [J]. Chinese folk therapy*, 2023, 31 (09): 112-116.
- [42] Wu Youyan, Shan Xuejiao, Dou Xiangyun, et al. *Research progress of non-drug methods for the treatment of chronic insomnia in traditional Chinese and Western medicine [J]. World Journal of Sleep Medicine*, 2021, 8 (07): 1288-1296.