

# *Theoretical Analysis of Qingxin Ningshen Decoction in the Treatment of Insomnia*

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**Abstract:** Qingxin Ningshen decoction was founded by Professor Yang Zhihong, a famous traditional Chinese medicine in Shaanxi Province, on the basis of the classic prescription “Huanglian Ejiao Decoction”. It has the function of calming the heart and calming the mind, nourishing yin and reducing fire. It has a significant effect in the clinical treatment of insomnia of heart and liver fire type. Through the interpretation of the theoretical basis and formula meaning of Qingxin Ningshen decoction, this paper analyzes the relationship between this prescription syndrome and insomnia, and makes a theoretical analysis on the theory and mechanism of Qingxin Ningshen Decoction in the treatment of insomnia, in order to provide a new way of diagnosis and treatment for insomnia.

## 1. Introduction

Insomnia is called “insomnia” in traditional Chinese medicine, which can be manifested as difficulty in falling asleep, easy to wake up or wake up early. Patients are dissatisfied with sleep time and / or sleep quality, and therefore affect daytime function <sup>[1]</sup>. The survey shows that 24% of adults think they have “poor sleep”, and 30% ~ 50% of the general population have insomnia symptoms <sup>[2-4]</sup>. In recent years, with the change of people's lifestyle, the development of social diversity and the pressure brought by work competition, many people have a fast-paced life, high-intensity work, irregular work and rest habits and bad diet structure. The interaction of the above factors can lead to insomnia <sup>[5]</sup>. Long term lack of sleep not only increases the risk of patients suffering from other diseases and affects human physical and mental health, but also increases the incidence of traffic accidents and industrial injuries, resulting in the decline of social production efficiency and a great burden on social economy <sup>[6]</sup>. Modern medicine believes that sleep is a basic biological process, which is affected by circadian rhythm and metabolic balance in the body. The alternation of sleep and wakefulness reflects the periodic activities of neural circuits in the brain. It is considered that the neurons promoting sleep and wakefulness activate alternately to regulate the sleep / wakefulness cycle of the human body <sup>[7]</sup>. Western medicine treatment mainly includes melatonin receptor agonists, benzodiazepine receptor agonists, appetite receptor antagonists and hypnotic antianxiety drugs <sup>[8]</sup>. However, in the treatment, there will be adverse reactions such as dizziness, fatigue, sleepiness and so on. The patient's compliance is poor, so it is difficult to achieve significant curative effect. Traditional Chinese medicine believes that insomnia is due to the dysfunction of Zang Fu organs, the imbalance of Qi and blood, and the imbalance of yin and Yang,

resulting in mental loss or uneasiness<sup>[9]</sup>. Therefore, to explore the theory of Professor Yang Zhihong's self-made prescription Qingxin Ningshen Decoction in the treatment of insomnia, in order to provide new diagnosis and treatment ideas for the treatment of insomnia.

## 2. Origin and Meaning of Qingxin Ningshen Decoction

Qingxin Ningshen decoction was born out of Huanglian Ejiao decoction. It was developed by Professor Yang Zhihong, a famous traditional Chinese medicine in Shaanxi Province, based on his many years of clinical experience and research. Article 303 of the treatise on Febrile Diseases says: “if you have Shaoyin disease for more than two or three days, you will be upset and can't lie down. It's the master of Huanglian donkey hide gelatin soup<sup>[10]</sup> This is the syndrome treatment of Shaoyin Yin deficiency, excessive fire and restlessness in the heart of patients caused by heart kidney disharmony. Professor Yang Zhihong found through clinical practice that most of the insomnia patients with the basic pathogenesis of “heart kidney disharmony, water and fire deficiency” develop the syndrome of cold and heat deficiency and excess, and the clinical manifestations also have different emphasis due to individual differences. Therefore, for the treatment of such deficiency and excess mixed diseases and syndromes, Huanglian Ejiao decoction is cut as follows: 10g Huanglian, 10g donkey hide gelatin, 12g *Scutellaria baicalensis*, 15g *Jiaoshanzhi*, 10g *Polygala tenuifolia*, 15g *Suanzaoren*, 10g *shouwuteng*, 15g *Poria cocos*, 12g fried *Atractylodes macrocephala*, 10g *Magnolia officinalis* and 10g talc. In the prescription, *Coptis chinensis* and donkey hide gelatin are still the king. The bitter and cold *Coptis chinensis* enters the heart meridian and specifically clears the hyperactive heart fire. Donkey hide gelatin tastes sweet and has a flat nature. It enters the kidney meridian and nourishes the kidney water; It is supplemented by *Scutellaria baicalensis* and *Jiaoshan Gardenia* to help the work of *Coptis chinensis* and eliminate annoyance; Wild jujube kernel, *Polygala tenuifolia* and *Shouwu tengning* calm the mind and replenish the painstaking efforts of loss; *Poria cocos* and *Atractylodes macrocephala* can strengthen the spleen and infiltrate dampness, which can not only prevent *Coptis chinensis* and other bitter injuries to the stomach, but also make donkey hide gelatin and other tonics but not greasy; *Magnolia officinalis* dries dampness and Qi, talc clears heat and dampness to relieve internal evil caused by deficiency. The whole recipe has tonic in cold and clear, cold and heat are used together, and the skill of clearing the heart, calming the mind, nourishing yin and reducing fire is gathered together. It conforms to the basic principle of “tonifying deficiency and discharging excess, communicating Yin and Yang” proposed in the Yellow Emperor's Internal Classic for the treatment of insomnia<sup>[11]</sup>.

## 3. Relationship between Qingxin Ningshen Decoction and Insomnia

Insomnia refers to the disease caused by various reasons, with difficulty in falling asleep, easy to wake up and insufficient sleep time as the main clinical manifestations<sup>[12]</sup>. Traditional Chinese medicine believes that the occurrence of insomnia is related to improper diet, emotional disorder, overwork Long illness is closely related to physical deficiency and other factors. Clinically, insomnia of heart and liver fire type is the most common. Human emotional factors are most likely to affect the heart and liver, which is also the main cause of insomnia. “Su Wen · Linglan secret classics” says: “the mind is the official of the monarch, and the gods are out of the way”. If the function of the mind is normal, the mind is energetic and sleeps at night and day; “Lingshu Benshen” said: “the liver stores blood, and the blood gives up the soul.” If the liver blood is sufficient and the soul gives up, the night sleep will be peaceful<sup>[13]</sup>. If the mood is not smooth, the liver Qi is depressed, the depression turns into fire and disturbs the mind, the mind is uneasy and sleepless; Or the five ambitions are too extreme, and the fire in the heart disturbs the spirit and can't sleep; If there is deficiency of element body Yin, excessive atrial exertion and loss of kidney yin, the heart

fire will be hyperactive, and the kidney water can not restrict the heart fire, which will disturb the mind and lead to insomnia. Insomnia caused by lack of kidney water and hyperactivity of heart fire, most of the lesions are in the heart, liver and kidney. Its pathological changes always belong to the imbalance of yin and Yang, poor water and fire, and often have pathological factors such as phlegm and blood stasis due to the loss of drainage of the liver or the loss of transportation of water and fluid by the spleen and kidney. As pointed out in the complete book of Jingyue, “when God is at ease, you will fall asleep, and when God is uneasy, you will not fall asleep... Those who are evil have more evidence, and those who have no reality have deficiency syndrome<sup>[14]</sup>.”

Therefore, the treatment of this kind of insomnia is mainly to nourish the heart and calm the mind, nourish yin and reduce fire, supplemented by nourishing the kidney and liver, invigorating the spleen and infiltrating dampness, and based on Qingxin Ningshen decoction. Modern pharmacological studies have proved that *Coptis chinensis* and *Scutellaria baicalensis* have central inhibitory effect<sup>[15]</sup>, which can prolong sleep time; Wild jujube kernel, *Polygala tenuifolia* and *Polygonum multiflorum* have sedative and hypnotic effects<sup>[16]</sup>. This also proves the scientific preciseness and clinical feasibility of Qingxin Ningshen decoction. For those with qi stagnation and blood stasis, *Magnolia officinalis*, turmeric, fried peach kernel, safflower and *Ligusticum chuanxiong* can be added; If phlegm and heat disturb the heart, you can add *Pinellia ternata*, dannanxing, Zhuru and Tianzhu yellow as appropriate; If the degree of insomnia is serious or long-term insomnia often has the characteristics of many dreams, easy to wake up at night and difficult to fall asleep again after waking up, magnets, forged keel and forged oysters can be added to calm the nerves and strengthen the calming effect of Qingxin Ningshen decoction.

#### 4. Modern Research on Qingxin Ningshen Decoction

Professor Yang Zhihong<sup>[17]</sup> randomly divided 62 insomnia patients into treatment group and control group. 42 cases in the treatment group took Qingxin Ningshen Decoction orally, 1 dose a day; 20 cases in the control group were treated with Tianwang Buxin pills, 8 capsules each time, 3 times a day. All patients were treated for 3 weeks. The therapeutic effect was formulated according to the insomnia curative effect standard of diagnosis and treatment standard and prescription selection of TCM syndrome<sup>[18]</sup> and the guiding principles of new research of traditional Chinese medicine<sup>[19]</sup>. The results showed that the total effective rate of the treatment group was 92.86% and that of the control group was 75.00%. There was significant difference between the two groups ( $P < 0.01$ ). Research shows that Qingxin Ningshen decoction has a satisfactory effect on insomnia. Zhu Xiaona<sup>[20]</sup> and others randomly divided 78 patients with insomnia complicated with anxiety and depression into two groups, 39 cases in each group. The control group was treated with benzodiazepine hypnotics, and the treatment group was treated with Qingxin Ningshen Decoction on the basis of the control group. The course of treatment of both groups was 4 weeks. Before and after treatment, the patients in the two groups were evaluated by Pittsburgh sleep quality index (PSQI), Hamilton Anxiety Scale (HAMA) and Hamilton Depression Scale (HAMD). The results showed that after treatment, the PSQI score, HAMA score, HAMD score, disease recurrence rate and adverse reactions of the treatment group were better than those of the control group ( $P < 0.05$ )

#### 5. Conclusion

Insomnia has become a common disease in today's society, and the age of onset tends to be younger. Traditional Chinese medicine has obvious advantages in overall treatment. It is better than western medicine in improving sleep quality and preventing anxiety and depression. Traditional Chinese medicine for insomnia has been discussed by many doctors in the past dynasties. Although its pathogenesis is different from the prescription, and there is no unified standard, it is generally

inseparable from Qi, blood and Yin and Yang. As stated in the Yellow Emperor's Internal Classic, "treatment must be based on the essence".

Qingxin Ningshen decoction is mainly used to calm the mind, nourish yin and reduce fire. It is mainly used to treat insomnia of heart and liver fire flourishing type. Its pathological changes always belong to the excess of Yang and the decline of yin and Yang and the loss of yin and Yang. The disease is located in the heart, but it is closely related to the lung, liver, spleen and kidney. Therefore, in clinical application, it should examine the syndrome, seek the cause and treat it with the syndrome. Although there are reports on the clinical research of Qingxin Ningshen Decoction in the treatment of insomnia, there is still a lack of relevant experiments for deeper research, and its mechanism still needs to be further discussed, so as to make Qingxin Ningshen Decoction better applied to the prevention and treatment of insomnia.

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