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Research Progress on the Application of Techniques of Traditional Chinese Medicine Nursing in Senile Insomnia

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Abstract: *With the increasing aging population in China, insomnia has become a significant health concern among the elderly. This study reviews the current application of Traditional Chinese Medicine nursing techniques, such as auricular acupoint pressure, tuina massage, acupoint patch, moxibustion, aromatherapy, traditional Chinese medicine footbath, and combined therapy, in managing senile insomnia. The aim is to provide insights for improving sleep quality, reducing the risk of complications, and promoting healthy aging.*

Keywords: *Senile Insomnia; Traditional Chinese Medicine Nursing Techniques; External Treatment Techniques; Review*

1. Introduction

Insomnia is a sleep disorder characterized by difficulty initiating sleep, sleep maintenance disturbances, and reduced sleep quality[1]. The elderly population demonstrates particularly high prevalence rates, and the prevalence of insomnia among people over 65 years old in China is 20%~50%[2]. Chronic insomnia contributes to a decline in the quality of life and cognitive ability of the elderly[3], while also elevating risks for mental health comorbidities, including anxiety and depression[4]. And the existing treatment is based on sleeping drugs, but long-term medication use can induce delayed reactions, drug dependence, and other adverse effects[2]. The elderly are more prone to chronic diseases, and they need to take a variety of drugs, further increasing medication-related hazards. These concerns underscore the urgent need to develop safer and more effective therapeutic alternatives. Recent years have witnessed significant advancements in Traditional Chinese Medicine (TCM) nursing techniques. The "Healthy China 2030" strategic plan[5] explicitly advocates for the integration of TCM with elderly care, creating a favorable policy environment for applying TCM nursing interventions to elderly insomnia. This review examines the etiology and pathogenesis of insomnia in the elderly, the common syndrome patterns, and the current applications and limitations of major TCM nursing techniques. Our analysis aims to inform future clinical practice and research directions in this field.

2. The etiology of insomnia in the elderly

In TCM theory, insomnia in the elderly falls under the diagnostic categories of "sleeplessness", "inability to lie comfortably", and "inability to close the eyes". The Ling shu·Ying wei sheng hui classically describes this condition: "With aging, the decline of qi and blood causes loosening of muscles, obstruction of meridians, and conflict among the visceral qi. When nutritive qi (ying qi) weakens and defensive qi (wei qi) turns inward, daytime alertness diminishes and nighttime sleep becomes disturbed". In elderly individuals, organ weakness and insufficiency of qi and blood result in malnourishment of the spirit, making deficiency patterns particularly common in their insomnia manifestations[6]. The primary pathological factors are considered to be qi deficiency and blood depletion, as well as yin-yang imbalance. The pathological characteristics manifest as root deficiency with superficial excess, with common disease mechanisms including: disharmony between nutritive and defensive qi (ying-wei), yin-yang imbalance, qi-blood disharmony, and dysfunction of the zang-fu organs. TCM emphasizes pattern differentiation and treatment, following the principles of reinforcing deficiency and reducing excess, regulating yin and yang, and holistic regulation through the zang-fu organs, meridians, and collaterals, and the qi-blood

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system[7].

3. Application of Chinese medicine nursing technology in elderly insomnia

3.1 Auricular acupoint bean pressure

It is recorded in Ling Shu·Kou Wen that "the ear is the place where the meridians gather". Ear points are distributed in specific points on the human auricle, and have a very close relationship with internal organs, meridians, tissues, and organs. Min et al.[8] applied stimulation to five sleep-related auricular points (Shenmen, liver, heart, occipital bone, and anterior pituitary) for an 8-week intervention, observing significant prolongation of N3 deep sleep duration, alongside improvements in depressive symptoms and quality of life. There are also scholars who combined the theory of meridian flow injection to select the corresponding organs and qi and blood flow through the strongest function of the hour pressure ear points to enhance the efficacy of treatment, such as Liang Yanyan et al.[9] selected heart and spleen deficiency type elderly insomnia patients as the object of the study, take the Shenmen, heart, subcortical, sympathetic and other main points, with acupuncture points according to the type of evidence to choose the spleen and the small intestine, the pericardium meridian, the spleen meridian and the small intestine meridian corresponding to the implementation of the midday, the Si time and the time of the press, the results show that The results showed that compared with the conventional compression group, the patients in this group achieved more significant therapeutic effects in terms of sleep quality and improvement of Chinese medicine symptoms. Liu Xiaolin et al.[10] found through data mining, Shenmen is the most commonly used auricular point for the treatment of insomnia, and according to the auricular point network analysis, Shenmen, heart, subcortical, sympathetic for the treatment of insomnia as the core of the auricular point combinations, according to the patient's different types of evidence with the heart, liver, spleen, kidney and other auricular points with the treatment of the spleen, tonifying the kidneys and nourishing the heart and tranquillising the mind, with the liver, diarrhoea and harmonization of the internal organs, to treat insomnia and related symptoms to the maximum extent.

3.2 Acupressure

Acupressure is the use of techniques to stimulate specific acupoints to dredge the meridians and collaterals, to make the various functions of the body coordinated and balanced[11]. Some studies have shown[12] that the most commonly used acupoints for preventing and treating insomnia are Baihui, Sun, Shenmen, and Yintang, with the highest confidence in the combination of Sun-Yintang and Sun-Yintang-Baihui. Different scholars also combine specific techniques to massage elderly insomnia patients, for example, Zhang Hongshi et al.[13] use vibration abdomen ring kneading method for abdominal massage, "chest and abdomen, the five viscera and six bowels of the palace city, yin and yang qi and blood of the source", the ring of the umbilicus, which can be adjusted to the whole body of the body and stimulate the role of the body; Guo Shuangyun et al.[14] use the four-part massage method and dialectically selected meridians and acupoints in the head, abdomen, back, and feet for massage, both of which have achieved significant therapeutic effects. In addition, some scholars have considered the use of essential oils with pharmacological effects as a massage medium, and synergized with acupoints and massage techniques to enhance the effect of intervention. For example, Zhou Jiatong et al.[15] combined compound essential oils with tranquilising and calming effects with acupressure, finger kneading, and finger-moisture techniques to select seven acupoints, namely, Sun, Fengchi, Yintang, Shenting, Shenmen, Neiguan, and Sanyinjiao, and carried out massages. The results showed that it was significantly better than simple acupoint massage in improving the sleep quality and cognitive function of the elderly, and the longer the time of use, the more obvious the improvement effect.

3.3 Acupuncture Point Patching

Acupressure refers to the application of drugs to specific acupoints, through the body surface-acupoint-meridian pathway, to play a dual regulatory effect of drugs and meridian yoga[16]. Some studies have shown[17] that the acupoints often selected for the treatment of insomnia are Yongquan, Shenque, Neiguan, and Sanyinjiao, and the Chinese medicines that are used more frequently for the treatment of insomnia are sour jujube nut, cinnamon, Coptis chinensis, Yuanzhi, and Wu Zhuyu. Yongquan point is the source of the kidney meridian, which can lead kidney fire downward and play the role of regulating yin and yang, and Shenque point is the intersection of meridians, which has the efficacy of regulating the whole body's meridians and qi and blood. Qin Shan et al.[18] used Jiaotai pills to apply acupoints to elderly

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insomnia patients with heart-kidney disorders, and the acupoints were selected as Yongquan, Shenque, Xinyu, and Kidney Yu, which showed that the patients' sleep quality, daytime dysfunction, and cognitive function were significantly improved, and there were no significant adverse effects. Neiguan is the meeting point of the eight meridians, which has the effect of calming the heart and tranquillising the mind; insomnia is closely related to the liver, spleen and kidney, and Sanyinjiao is the meeting point of the three yin meridians of the foot, the intersection of the three meridians of the liver meridian, the spleen meridian and the kidney meridian, which is not only able to tonify and nourish blood, but also able to nourish the kidney and fix the essence, and nourish Yin and soften the liver. Xiang Jiali et al.[19] randomly divided elderly insomnia patients with yin deficiency and fire exuberance type into a control group and an observation group, the control group was given conventional western medicine treatment, and the observation group selected nourishing yin and fire, nourishing the blood and tranquillising the spirit class of traditional Chinese medicine prescriptions for the patch treatment, and the acupoints were selected as Sanyinjiao, Zusanli, Neiguan, Shenmen and Shenque. The results showed that the acupoints had a greater advantage in improving the total sleep duration and deep sleep duration, as well as improving anxiety and depression.

3.4 Moxibustion

Moxibustion mainly works through the temperature stimulation produced by the burning of moxa and the medicinal properties of moxa to achieve the effect of warming the blood, promoting the circulation of qi, and supporting the correctness of the body to get rid of diseases. Modern research has found that moxibustion can not only regulate blood circulation but also play a regulatory role in all systems of the body[20]. Some literature[21] summarises the acupuncture points with a higher frequency of application of moxibustion in the treatment of insomnia in the order of Baihui, Sanyinjiao, Shenmen, and Zusanli. Zhang Min et al.[22] selected 60 elderly patients with insomnia and heart-kidney imbalance as research subjects, the control group implemented comprehensive nursing measures, the research group applied moxibustion of wheat grains based on the control group, and the results showed that the research group's improvement in sleep quality, anxiety, and depression was significantly better than that of the control group. Qiao Ruizhu et al.[23] implemented moxibustion care for elderly patients with insomnia, adopting corresponding acupuncture points and moxibustion methods for patients with different types of evidence, which improved clinical symptoms while enhancing nursing satisfaction, and is worthy of clinical promotion. However, some studies[24] have shown that moxa smoke can cause discomfort to sensitive people and increase the fatigue of healthcare workers, which shows that the safety and innovation of moxibustion still need to be improved.

3.5 Aromatherapy

Aromatherapy is a very special external treatment method, and there are many records in ancient Chinese medical texts of using aromatic drugs to treat insomnia[25]. In modern times, many scholars have used TCM aromatherapy for insomnia with good efficacy. Tang et al.[26] conducted a meta-analysis of the literature related to the use of aromatherapy to relieve insomnia in patients, and the results showed that this therapy is effective, and the most commonly used aromatics for insomnia are lavender, orange peel, and roses, etc., and the inhalation method is more effective than the massage method. Feng Xue et al.[27] according to the common pathology of insomnia in the elderly with the compound formula for the herbal sleep aid balm, given to the elderly insomnia herbal sleep aid balm, the intervention cycle of 8 weeks, the results show that the study group's sleep condition has been significantly improved ($P<0.05$), and the total effective rate of 84.8%. Numerous studies at home and abroad[28-30] have confirmed that aromatherapy has significant efficacy in improving sleep, and can also have a calming and soothing effect, with minimal adverse effects, worthy of clinical promotion.

3.6 Chinese medicine foot bath

From the point of view of Chinese medicine, there are specific acupoints for the five organs and six bowels in the human body, and the acupoints of the feet are connected with the five organs and six bowels in the human body, and the herbal foot bath can regulate the function of the internal organs and promote the balance of yin and yang. Wang Xiangbo et al.[31] found that traditional Chinese medicine footbaths are better than ordinary western medicine groups in prolonging sleep duration, increasing sleep depth, and increasing serum dopamine and 5-hydroxytryptamine content. Lu Yihong[32] gave elderly insomnia patients traditional Chinese medicine internal medicine care together with traditional Chinese medicine footbath, and found that there was a positive effect on both sleep quality and psychological state. The

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simplicity and convenience of the Chinese medicine footbath make it easier for the elderly population to adhere to, and it can be well applied to elderly institutions and communities.

3.7 Combined therapy

Some scholars use a variety of Chinese medicine nursing technology integrated applications in the treatment of insomnia in the elderly, which can play a synergistic advantage of a variety of technologies. For example, Wang Haijing et al.[33] carried out acupressure combined with auricular pressure beans on elderly insomnia patients, both of which play the role of cerebral cortex excitation and inhibition through the stimulation of the relevant acupoints, and selected Sanyinjiao, Zusanli, Neiguan, Shenmen, and Shen Que acupoints for the acupressure, and Shenmen, Heart, Liver, Kidney, and Cortical acupoints for auricular pressure beans, which is superior to single therapy in terms of conditioning patients' insomnia state, improving the quality of sleep, and alleviating the state of fatigue. Zeng Manping et al.[34] considering the pain of auricular acupoint pressure, combined with auricular acupoint copper counselling and scraping to reduce the pain, can increase the efficacy of auricular acupoint pressure, which can effectively improve the structure of sleep and improve the quality of sleep of patients. Scholars can explore the organic combination of appropriate TCM nursing techniques and modern medical methods to develop comprehensive treatment plans with improved efficacy and shorter treatment duration, providing insomnia patients with better diagnosis and treatment options.

4. Discussion

4.1 Techniques of Chinese medicine nursing can improve the symptoms of insomnia in the elderly

Elderly insomnia patients are usually accompanied by several adverse symptoms, including anxiety, depression, and fatigue[35], and there is also a correlation between sleep quality and cognitive function, and cognitive function is impaired in those with decreased sleep quality[36]. The results of the previous review showed that the insomnia symptoms of the patients were obviously improved after the treatment of Chinese medicine nursing technology, and at the same time, it can also effectively alleviate the negative emotions such as anxiety, depression and fatigue, which reduces the negative impact on cognitive function, and it can obviously improve the quality of life of the elderly patients, reduce the occurrence of risky events, and there are no obvious adverse reactions, which is worth promoting the use of the clinic.

4.2 Need to further standardise Chinese medicine nursing technology and improve relevant clinical research

At present, many TCM nursing technology intervention strategies present diversified characteristics and lack standardised and systematic operation procedures[37], the application for insomnia in the elderly is mainly reflected in the differences in the selection of acupoints, stimulation frequency, strength of force application, operation techniques, and application of unilateral and bilateral acupoints, etc., which can be seen that the operation standards of TCM nursing technology need to be further standardised. It is worth noting that most of the nursing effect evaluation criteria involved in TCM nursing technology programmes are more subjective, which affects the judgement of therapeutic effect[38], and most of the evaluation tools in research on the treatment of sleep focus on the use of subjective scales, and there is a relative paucity of clinical reports on the objective sleep indexes, especially the assessment of sleep structure, and a lack of intervention effect follow-up, so that in-depth studies on their long-term effects are needed. Therefore, scholars can increase the objective evaluation indexes or carry out animal experiments to explore the mechanism and efficacy in the follow-up study, with a view to perfecting the evaluation system of insomnia, and providing a reliable basis for the development of standards for the treatment of insomnia by appropriate techniques in Chinese medicine nursing.

5. Conclusions

TCM nursing techniques can regulate the qi of internal organs and harmonise yin and yang of the organism, and have significant advantages in improving insomnia-related symptoms, improving sleep quality and reducing adverse reactions, etc. In recent years, they have been developing rapidly in the management of chronic diseases, which is more in line with the characteristics of the coexistence of multiple diseases among the elderly, and are worthy of being promoted in the clinic. However, it is still

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necessary to continue to explore the operation process, the standardisation of evaluation criteria, and the improvement of the evaluation system, to provide a reference basis for the development of standardised programmes.

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