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Practice and Research Progress of Auricular Massage Therapy
for Insomnia in Patients with Breast Cancer

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Abstract

This paper discusses the practice and research progress of traditional Chinese medicine (TCM) auricular acupuncture massage therapy for insomnia in breast cancer patients. Firstly, it introduces the background and significance of insomnia in breast cancer patients, pointing out the limitations of traditional treatment methods. It then elucidates the theoretical basis of TCM auricular acupuncture massage for insomnia, including ear acupuncture theory, the association between massage and insomnia, and the treatment mechanism. Subsequently, it describes the clinical practice of TCM auricular acupuncture massage in the treatment of insomnia in breast cancer patients, including research methods, practical processes, and result analysis. Finally, it summarizes the current research progress and prospects future research directions and trends.

Keywords

Breast cancer patients, insomnia, traditional Chinese medicine, auricular acupuncture massage

1. Introduction

Breast cancer is one of the common malignant tumors in women, with its incidence increasing year by

year, which seriously affects the physical and mental health of patients. Meanwhile, breast cancer patients often suffer from sleep problems such as insomnia, severely affecting their quality of life and recovery process. Traditional treatment methods have certain limitations in addressing insomnia in breast cancer patients, thus necessitating the search for more effective treatment modalities. TCM, as a traditional medical system, has rich theoretical and clinical experience in addressing sleep problems such as insomnia. Among them, auricular acupuncture massage, as a commonly used therapy in TCM, has attracted attention in the treatment of insomnia. Auricular acupuncture massage, by stimulating acupoints on the ear, regulates physiological functions of the body, and has been proven to have certain efficacy in improving sleep quality. However, the practice and research of TCM auricular acupuncture massage therapy for insomnia in breast cancer patients are still in the early stages. Therefore, this paper aims to explore the practice and research progress of TCM auricular acupuncture massage therapy for insomnia in breast cancer patients, provide references for clinical practice, and propose suggestions for future research. By systematically summarizing and analyzing the application and research progress of TCM auricular acupuncture massage in the treatment of insomnia in breast cancer patients, it is expected to provide new ideas and methods for improving the sleep quality, quality of life, and recovery outcomes of breast cancer patients.

2. Research Status of Insomnia in Breast Cancer Patients

2.1 Epidemiological Characteristics and Impacts of Insomnia in Breast Cancer Patients

Breast cancer is one of the common malignant tumors in women, with its incidence showing an upward trend. According to statistics, millions of people worldwide are diagnosed with breast cancer each year, and a portion of patients face the problem of insomnia and other sleep disorders. The epidemiological characteristics of insomnia in breast cancer patients mainly manifest in the following aspects: Firstly, insomnia has a high incidence rate among breast cancer patients. Studies have shown that about 50% to 70% of breast cancer patients have varying degrees of insomnia symptoms, including difficulty falling asleep, shallow sleep, and frequent nocturnal awakenings. Secondly, insomnia has a significant impact on the quality of life and recovery of breast cancer patients. Insomnia not only leads to daytime fatigue and lack of concentration but also exacerbates the burden of cancer treatment on patients, affecting treatment outcomes and the recovery process. Additionally, insomnia may be closely related to the psychological state of breast cancer patients. Research indicates that there is a certain correlation between insomnia and psychological issues such as anxiety and depression, which further affect the psychological health and emotional stability of patients. In summary, the epidemiological characteristics and impacts of insomnia in breast cancer patients are significant. Therefore, it is necessary to further explore effective treatment methods to improve the sleep quality, quality of life, and recovery outcomes of patients (Henneghan & Harrison, 2015).

2.2 Limitations and Challenges of Traditional Treatment Methods

Traditional treatment methods for addressing insomnia in breast cancer patients mainly include

medication and psychological interventions. However, these traditional methods have certain limitations and challenges, as manifested in the following aspects: Firstly, medication treatment carries the risks of drug dependence and side effects. Commonly used drugs for treating insomnia include sedatives and tranquilizers, long-term use of which may lead to drug dependence and resistance, and may cause a series of adverse reactions such as dizziness, nausea, and lack of concentration, thereby affecting patients' daily lives and treatment outcomes. Secondly, although psychological interventions can help patients alleviate anxiety, depression, and other psychological problems, their efficacy is greatly affected by individual differences and the level of therapists, and they require a long treatment period and high costs, which may not be suitable for all patients. Furthermore, traditional treatment methods often only intervene in the symptoms of insomnia, neglecting the underlying causes of insomnia in breast cancer patients. Insomnia in breast cancer patients may be related to factors such as the disease itself, treatment side effects, and emotional stress, which need to be comprehensively considered. Therefore, single treatment methods are difficult to achieve ideal results. In summary, traditional treatment methods have certain limitations and challenges in addressing insomnia in breast cancer patients. Therefore, it is necessary to explore more comprehensive and effective treatment modalities to improve the sleep quality and quality of life of patients.

2.3 Theoretical Basis and Existing Research Progress of TCM Treatment for Insomnia

The theoretical basis of TCM treatment for insomnia is rooted in traditional Chinese medicine theory, including concepts such as balancing yin and yang, regulating qi and blood, and calming the mind. TCM believes that insomnia is caused by various factors such as dysfunction of viscera, stagnation of qi and blood circulation, and emotional disturbances (Witt & Cardoso, 2016). It advocates regulating the physiological functions of the body from a holistic and dynamic perspective to achieve the purpose of treating insomnia. In the methods of TCM treatment for insomnia, various methods such as herbal decoctions, acupuncture, massage, and qigong are often used. Among them, acupuncture and massage, as non-drug therapies, are widely used in the treatment of insomnia and are believed to regulate the circulation of qi and blood in the body, soothe emotions, and improve sleep quality. In recent years, research on TCM treatment for insomnia has gradually increased and achieved some positive results. Some clinical studies have shown that the use of traditional Chinese medicine or acupuncture to treat insomnia can significantly improve patients' sleep quality, alleviate insomnia symptoms, and the efficacy is relatively stable. In addition, some basic research has also revealed the possible mechanisms of TCM treatment for insomnia, such as regulating neurotransmitter levels and improving brain wave activity, providing deeper theoretical support for TCM treatment for insomnia. However, there are still some shortcomings in the current research on TCM treatment for insomnia, such as small sample sizes, insufficiently rigorous study designs, and inadequate mechanism research. Therefore, it is necessary to strengthen research on TCM treatment for insomnia in the future, further explore its treatment mechanisms, improve its clinical application level, and provide more effective treatment options for patients (Garland, Mahon, & Irwin, 2019).

3. Theoretical Basis of Auricular Acupuncture Massage in Insomnia Treatment

3.1 Overview of Auricular Acupuncture Theory

The theory of auricular acupuncture in Traditional Chinese Medicine (TCM) is an essential component, which posits that specific areas on the ear correspond to various organs and tissues of the body. Stimulating these ear acupoints can regulate the body's physiological functions to achieve the purpose of treating diseases. Ear acupoints can be classified into multiple regions based on their location and function, such as the tip of the tongue area, the eye-ear-throat area, upper limb area, trunk area, and limb joint area. Each acupoint is associated with specific organs or tissues of the body, reflected in specific locations on the ear.

The theoretical basis of TCM auricular acupuncture massage mainly includes the following aspects:

Firstly, the theory of reflex zones. TCM believes that the acupoints on the ear reflect various organs and tissues of the body. Stimulating these acupoints on the ear can affect the corresponding organs and tissues through neural reflexes, neuroendocrine pathways, etc., thereby regulating their functional states. Secondly, the theory of meridians. TCM holds that there is a meridian system in the body through which qi and blood circulate. The acupoints on the ear are connected to the meridians, and stimulating these acupoints can regulate the circulation of qi and blood in the meridians to achieve the purpose of treating diseases. Additionally, modern medical research has found that the acupoints on the ear are rich in blood vessels, nerve endings, and tissue cells. Stimulating these acupoints can promote blood circulation, regulate nerve activity, and release bioactive substances, which have a certain effect on improving physical health. In summary, the theoretical basis of auricular acupuncture massage in the treatment of insomnia is mainly derived from the theories of reflex zones and meridians in TCM. By stimulating acupoints on the ear, the physiological functions of the body can be regulated to improve insomnia symptoms (Shin & Park, 2018).

3.2 Association between Auricular Acupuncture Massage and Insomnia

TCM holds that acupoints on the ear correspond to various organs and tissues of the body, and stimulating these acupoints can regulate the body's physiological functions, including the nervous system, endocrine system, circulatory system, etc., thereby affecting insomnia symptoms. The acupoints on the ear related to insomnia mainly include Shenmen (Spirit Gate), Xinshenmen (Heart Spirit Gate), and Xinyu (Heart Shu). By massaging these acupoints, it can soothe emotions, stabilize the mind, and improve insomnia symptoms. Specifically, ear massage can stimulate nerve endings on the ear, promote blood circulation and lymphatic drainage, relieve tension and fatigue, thereby helping patients fall asleep better and maintain a good sleep state. Additionally, the acupoints on the ear are connected to neurological structures such as the cerebral cortex and hypothalamus. Stimulating these acupoints can regulate the function of the nervous system, alleviate anxiety, depression, and other emotional issues, thereby improving sleep quality. At the same time, the acupoints on the ear are closely related to the endocrine system. By stimulating these acupoints, hormone levels in the body can be regulated, such as promoting the secretion of melatonin, which helps regulate the biological clock and improve sleep

quality. In summary, there is a close association between auricular acupuncture massage and insomnia. By stimulating specific acupoints on the ear, physiological functions such as the nervous system and endocrine system can be regulated, relieving emotional issues and improving sleep quality, thereby treating insomnia.

3.3 Mechanism Discussion of Auricular Acupuncture Massage for Insomnia Treatment Supported by TCM Theory

TCM believes that insomnia is caused by factors such as restless mind, dysfunction of viscera, and stagnation of qi and blood circulation. The acupoints on the ear correspond to various organs and tissues of the body, and by stimulating these acupoints, the function of relevant organs can be regulated to treat insomnia. Specifically, the mechanism of auricular acupuncture massage for insomnia treatment supported by TCM theory mainly includes the following aspects: 1) Regulation of the nervous system: Acupoints on the ear are connected to neurological structures such as the cerebral cortex and hypothalamus. Stimulating these acupoints can regulate the function of the nervous system, alleviate tension, anxiety, and depression, thereby improving insomnia symptoms. 2) Regulation of the endocrine system: Acupoints on the ear are closely related to the endocrine system. By stimulating these acupoints, hormone secretion in the body can be regulated, such as promoting the secretion of melatonin, which helps regulate the biological clock and improve sleep quality. 3) Improvement of qi and blood circulation: TCM believes that insomnia may be related to poor circulation of qi and blood. Ear massage can promote local blood circulation, improve the circulation of qi and blood, help stabilize the mind, and enhance sleep quality. 4) Adjustment of visceral function: Acupoints on the ear correspond to various organs of the body. Stimulating these acupoints can regulate the function of organs such as the heart, liver, and spleen, helping to relieve discomfort and promote sleep. In summary, the mechanism of auricular acupuncture massage for insomnia treatment supported by TCM theory is multifaceted, involving aspects such as the nervous system, endocrine system, circulation of qi and blood, and visceral function. By stimulating acupoints on the ear, the physiological functions of the body can be comprehensively regulated to improve insomnia symptoms.

4. Clinical Practice of Auricular Acupuncture Massage in the Treatment of Insomnia in Breast Cancer Patients

The clinical practice of auricular acupuncture massage in the treatment of insomnia in breast cancer patients is a therapeutic approach that integrates considerations of patient conditions, traditional Chinese medicine (TCM) theories, and practical operations. In conducting clinical research, the rigor of study design is crucial, ensuring the representativeness of samples and the scientific validity of research methods. When administering auricular acupuncture massage therapy to breast cancer patients, doctors need to fully understand the patients' medical characteristics and physical conditions, combine TCM theories, accurately select ear acupoints, and perform correct massage techniques. Additionally, doctors need to establish good communication and trust with patients, guide them to cooperate with the

treatment, and adjust treatment plans promptly to achieve optimal results. In practical application, the frequency and duration of auricular acupuncture massage should be adjusted based on the specific conditions of the patients. For breast cancer patients, the treatment process may be accompanied by discomfort such as pain, nausea, and fatigue. Therefore, massage techniques should be gentle and soft to avoid causing additional discomfort to the patients. Furthermore, doctors should pay attention to changes in patients' physical and mental states, provide timely psychological counseling and support, and help patients establish positive attitudes and healthy lifestyles. Apart from clinical operations, efficacy evaluation is also a key aspect of clinical practice. Doctors need to regularly assess aspects such as sleep quality and insomnia symptoms in patients to reflect treatment effects with scientific and objective data (Epstein, Liou, Romero et al., 2023). Additionally, it's essential to listen to patients' feedback and adjust treatment plans promptly to ensure the maximization of treatment effects. In terms of safety, doctors need to strictly follow operational norms to ensure that massage procedures do not cause adverse reactions or complications. Particularly for breast cancer patients, careful selection of acupoints and massage intensity is necessary to avoid affecting the patients' conditions and treatment progress. Additionally, doctors need to conduct comprehensive health assessments of patients, understanding their allergy history, medication usage, and other information to address potential issues promptly. In conclusion, the clinical practice of auricular acupuncture massage in the treatment of insomnia in breast cancer patients requires doctors to have rich clinical experience, professional TCM knowledge, and meticulous operational skills. Through scientifically standardized practices, personalized and effective insomnia treatment plans can be provided to breast cancer patients, thereby improving their quality of life and recovery outcomes.

5. Research Progress of Auricular Acupuncture Massage in the Treatment of Insomnia in Breast Cancer Patients

5.1 Overview of Current Research Progress

With increasing attention to traditional Chinese medical treatment methods, research on auricular acupuncture massage in the treatment of insomnia in breast cancer patients has made some progress. Current research mainly focuses on the following areas: Firstly, clinical research. Some clinical studies have shown that auricular acupuncture massage has certain therapeutic effects on insomnia in breast cancer patients. These studies have employed various methods and evaluation criteria, such as scale assessment methods and sleep monitoring device detection. The results indicate that auricular acupuncture massage can significantly improve patients' sleep quality and alleviate insomnia symptoms. Secondly, mechanism research. Some basic research endeavors to explore the possible mechanisms of auricular acupuncture massage in treating insomnia. These studies mainly use methods such as animal experiments and in vitro cell experiments to reveal the regulatory effects of auricular acupuncture massage on various aspects such as the nervous system, endocrine system, and immune system, providing deeper theoretical support for its effectiveness in insomnia treatment. Additionally, clinical

practice continues to enrich and deepen. Some clinical doctors actively conduct practical work in the treatment of insomnia in breast cancer patients using auricular acupuncture massage, continuously exploring treatment plans suitable for individual patient characteristics, and achieving certain clinical efficacy. However, current research still has some shortcomings, such as small sample sizes, insufficiently rigorous study designs, and insufficiently in-depth mechanism research. Therefore, future research needs to further strengthen the study of auricular acupuncture massage in the treatment of insomnia in breast cancer patients, improve research quality, expand research perspectives, to better promote its clinical application and further theoretical exploration.

5.2 Analysis of Clinical Trial Results

In clinical trials of insomnia treatment in breast cancer patients, auricular acupuncture massage as an alternative treatment method has achieved certain efficacy but also poses some issues to consider. Firstly, most clinical trials have shown that auricular acupuncture massage therapy can significantly improve sleep quality and alleviate insomnia symptoms in breast cancer patients. Through methods such as scale assessment or sleep monitoring device detection, significant improvements in sleep parameters of patients in the observation group, such as shortened sleep onset time, prolonged sleep duration, increased sleep efficiency, etc., and significant relief of insomnia symptoms were observed. These results indicate that auricular acupuncture massage has certain clinical prospects in the treatment of insomnia in breast cancer patients. However, a few clinical trial results also indicate that the effect of auricular acupuncture massage therapy on insomnia in some breast cancer patients is not significant. This may be related to individual differences, disease severity, treatment operation techniques, among other factors. Therefore, when administering auricular acupuncture massage therapy, it is necessary to fully consider the individual differences of patients, adopt personalized treatment plans, to improve treatment effectiveness and specificity. Additionally, some clinical trials have found that auricular acupuncture massage therapy may have certain safety issues, such as local skin allergic reactions, discomfort during massage, etc. Therefore, doctors need to operate cautiously during treatment, avoid adverse reactions, and adjust treatment plans according to the specific conditions of patients to ensure treatment safety and effectiveness. In summary, clinical trial results show that auricular acupuncture massage has certain efficacy in the treatment of insomnia in breast cancer patients, but there are also some issues that need further optimization and improvement. Future research needs to strengthen clinical studies of auricular acupuncture massage therapy, further explore its treatment mechanisms, optimize treatment plans, and provide breast cancer patients with more effective means of insomnia treatment (Deng, 2019).

5.3 Existing Problems and Prospects

In the treatment of insomnia in breast cancer patients using auricular acupuncture massage, despite some research progress and clinical effects achieved, there are still some problems to be solved and broad prospects for development. Firstly, the quantity and quality of current clinical trials need to be improved. Although some clinical trials have shown the efficacy of auricular acupuncture massage in

treating insomnia in breast cancer patients, due to small sample sizes and insufficiently rigorous study designs, some research results may be biased. Therefore, further large-sample, multicenter clinical trials are needed to verify the stability and reliability of treatment effects. Secondly, mechanism research needs to be more in-depth. Although some basic research has revealed possible mechanisms of auricular acupuncture massage in treating insomnia, further exploration of its action pathways and molecular mechanisms is still needed to better explain its clinical efficacy and provide more solid theoretical support for its clinical application. Furthermore, the personalization and precision of treatment plans are also the focus of future development. Insomnia symptoms in breast cancer patients are influenced by multiple factors, including the disease itself, treatment side effects, psychological stress, etc. Therefore, when administering auricular acupuncture massage therapy, personalized treatment plans need to be developed based on the specific conditions of patients, considering factors such as patient age, severity of the disease, psychological state, etc., to improve treatment specificity and effectiveness. Finally, safety and risk management are also issues that need attention. Although auricular acupuncture massage therapy is considered a safe non-pharmacological treatment method, there may still be certain safety hazards in practical operation, such as local skin allergic reactions, massage discomfort, etc. Therefore, doctors need to operate cautiously during treatment, monitor patients' reactions, and promptly address and avoid possible complications. In conclusion, auricular acupuncture massage therapy in the treatment of insomnia in breast cancer patients has broad development prospects, but existing issues need to be addressed, treatment plans and research designs need further improvement to provide patients with safer and more effective treatment methods.

6. Conclusion

Traditional Chinese Medicine (TCM) auricular acupuncture massage, as a non-pharmacological treatment method, has demonstrated certain efficacy and potential in the treatment of insomnia in breast cancer patients. Through a comprehensive analysis of clinical practice and research progress, the following conclusions can be drawn: Firstly, TCM auricular acupuncture massage has certain clinical effects in the treatment of insomnia in breast cancer patients. Clinical trial results show that TCM auricular acupuncture massage can significantly improve patients' sleep quality and alleviate insomnia symptoms, providing an effective treatment option for breast cancer patients. Secondly, the mechanism of TCM auricular acupuncture massage in treating insomnia is complex and diverse. Basic research indicates that TCM auricular acupuncture massage may exert therapeutic effects by regulating various functions of the nervous system, endocrine system, and immune system. However, the specific mechanisms of action require further in-depth study. However, TCM auricular acupuncture massage still faces some issues and challenges in the treatment of insomnia in breast cancer patients. The quantity and quality of clinical trials need to be improved, mechanism research needs to be more in-depth, and the personalization and safety management of treatment plans need further optimization. Therefore, future efforts should focus on strengthening clinical research and mechanism studies of TCM auricular

acupuncture massage in the treatment of insomnia in breast cancer patients, improving research quality, refining treatment plans, and providing patients with safer and more effective means of insomnia treatment. Meanwhile, doctors need to tailor personalized treatment plans based on the specific conditions of patients, and pay attention to the safety and risk management during the treatment process to enhance treatment efficacy and improve patients' quality of life.

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