

A Review of Research on the Treatment of Allergic Rhinitis Based on Existing Research Achievements in Traditional Chinese and Western Medicine

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Abstract: Allergic rhinitis is a common respiratory disease that imposes a burden on patients' daily life and work. This article reviews the existing research achievements of traditional Chinese and Western medicine, introduces the etiology and pathogenesis of allergic rhinitis, as well as the application and research progress of traditional Chinese and Western medicine in the treatment of allergic rhinitis. By summarizing and analyzing existing research, provide reference and guidance for further research on the treatment of allergic rhinitis.

Keywords: Allergic rhinitis; Traditional Chinese and Western medicine; Research review

1. Introduction

Allergic rhinitis, also known as allergic rhinitis (AR), involves abnormal immune system reactions in its pathogenesis. Due to exposure to specific allergens such as pollen, dust mites, animal dander, etc., repeated exposure to allergens can lead to IgE mediated allergic reactions, leading to inflammation. According to reports, about 10% -30% of the global population is troubled by allergic rhinitis. Although allergic rhinitis is often considered a mild disease, it has a significant impact on the quality of life and work efficiency of patients. The frequent onset of symptoms of allergic rhinitis, such as nasal congestion, runny nose, sneezing, and itching, not only seriously affects the patient's respiratory function, but also leads to sleep disorders, decreased academic and work abilities, and even affects mental health.

In the past few decades, traditional Chinese and Western medicine has become a commonly used method in the treatment of allergic rhinitis. Under the guidance of traditional Chinese medicine theory, traditional Chinese medicine treats allergic rhinitis through various pathways such as regulating the balance of yin and yang in the human body, adjusting immune function, improving nasal mucosal blood supply, and anti-inflammatory effects. Western medicine mainly relies on antihistamines, nasal hormone sprays and other drugs to play a role in inhibiting allergic reactions and reducing inflammatory reactions. The combination of traditional Chinese and Western medicine has gradually received attention in the treatment of allergic rhinitis, and its efficacy and safety have been verified in clinical practice. However, there is still some controversy and inadequacy regarding the specific indications, efficacy evaluation, and mechanism of action of the combination of Chinese and Western medicine in the treatment of allergic rhinitis.

This review aims to systematically explain the treatment of allergic rhinitis based on the existing research results of traditional Chinese and Western medicine through a comprehensive and analytical approach. We will delve into the application characteristics and efficacy evaluation of traditional Chinese medicine and Western medicine in the treatment of allergic rhinitis, and explore the mechanism and research progress of the combined treatment of traditional Chinese and Western medicine. At the same time, we will also summarize the current research results, propose future research directions and development trends, in order to provide more valuable references for the combined treatment of traditional Chinese and Western medicine for allergic rhinitis.

2. The application of traditional Chinese medicine in the treatment of allergic rhinitis

Traditional Chinese medicine has unique therapeutic characteristics in the treatment of allergic rhinitis, such as adjusting immune function, improving nasal mucosal blood supply, and anti-inflammatory effects. Professor Chen Xue and others summarized the application of traditional Chinese medicine in the treatment of allergic rhinitis in their literature review in 2015. They mentioned that traditional Chinese medicine has various therapeutic effects, including anti-inflammatory, anti allergic, and immune regulation, which can effectively alleviate symptoms of allergic rhinitis and improve quality of life.

Scholar Li Qiang and others found in their 2020 study that traditional Chinese medicine compound preparations have shown good efficacy and safety in the treatment of allergic rhinitis. Their study included multiple randomized controlled trials, and the results showed

that traditional Chinese medicine compound formulations have significant advantages in relieving symptoms and improving quality of life. Subsequently, Wei Fengxiang et al. (2024) suggested that Canger Zi San can inhibit inflammatory reactions, improve T cell balance, reduce eosinophil activity, and thus improve symptoms such as nasal mucosal edema, nasal congestion, and runny nose caused by spleen weakness, lung and spleen weakness, and kidney deficiency. Chen Wenming et al. (2022) found that the total effective rate of the observation group was significantly higher than that of the control group, and the incidence of adverse reactions was significantly lower than that of the control group. It was concluded that the modified Zhenwu Tang can significantly alleviate nasal symptoms in patients with moderate to severe allergic rhinitis with kidney yang deficiency syndrome, and its mechanism of action may be related to regulating the JAK2/STAT signaling pathway. Li Yunyan (2017) pointed out that the use of Tongqiao Rhinitis Capsules for the treatment of allergic rhinitis patients has a good effect, which can improve the clinical symptoms of patients and enhance their comfort in life.

Overall, research on the treatment of allergic rhinitis with traditional Chinese medicine has shown its advantages in symptom relief, anti-inflammatory, immune regulation, and long-term efficacy. However, further research is needed to verify its therapeutic mechanism, narrow the differences in clinical efficacy, and clarify the optimal dosage and regimen for use. In addition, clinical research needs to strengthen standardization and randomness to ensure the reliability and scientificity of research results.

3. The application of Western medicine in the treatment of allergic rhinitis

The Western medicine used for treating allergic rhinitis mainly includes antihistamines, steroid nasal sprays, and drugs that promote sinus drainage. For example, scholar Wei Lanfang (2024) concluded that the combination of Dust Mite Drops and Fluticasone Propionate Inhalation Aerosol can effectively improve clinical efficacy in the treatment of children with acute asthma and allergic rhinitis. Scholar Liu Qingfang (2023) selected 60 patients with allergic rhinitis who were treated in Xingguo County People's Hospital from January to December 2021 as the research object, and divided them into the experimental group and the reference group according to the random number table method, with 30 cases in each group. The experimental group was treated with stillastine hydrochloride tablets, and the reference group was treated with mometasone furoate nasal spray. After treatment, the AR symptom score, physical sign score, adverse reactions, and total effective rate of treatment of the two groups of patients were compared. Finally, it is concluded that the treatment of astastine hydrochloride tablets and mometasone furoate nasal spray can effectively improve the symptoms of patients with allergic rhinitis, improve the treatment efficiency, inhibit inflammatory reaction, and there is no statistically significant difference in safety.

In addition, Liu Qingfang selected 60 patients with allergic rhinitis who were treated in Xingguo County People's Hospital from January to December 2021 as the research object, and divided them into the experimental group and the reference group according to the random number table method, with 30 cases in each group. The experimental group was treated with astastine hydrochloride tablets, and the reference group was treated with mometasone furoate nasal spray. After treatment, the AR symptom scores, signs scores, adverse reactions, and the total effective rate of treatment of the two groups of patients were compared. Finally, it is concluded that the treatment of astastine hydrochloride tablets and mometasone furoate nasal spray can effectively improve the symptoms of patients with allergic rhinitis, improve the treatment efficiency, inhibit inflammatory reaction, and there is no statistically significant difference in safety.

It should be noted that the use of Western medicine to treat allergic rhinitis should follow the guidance of a doctor, choose appropriate drugs and doses based on the condition, and pay attention to the side effects and contraindications of the drugs. In addition, regular follow-up is necessary when using steroid nasal sprays for a long time to avoid adverse reactions. While taking Western medicine, non pharmacological treatment methods such as avoiding allergens and maintaining fresh indoor air can also be used to assist in the treatment of allergic rhinitis.

4. Research progress in the combination therapy of traditional Chinese and Western medicine

The combination therapy of Chinese and Western medicine has its unique advantages in the treatment of allergic rhinitis. With the assistance of traditional Chinese medicine, the dosage and side effects of Western medicine can be reduced, and the therapeutic effect can be improved. The mechanism of action of the combination therapy of Chinese and Western medicine is one of the focuses of research, and current research mainly focuses on immune regulation, anti-inflammatory effects, and antioxidant properties. For example, scholar Wang Wei (2020) used Tongqiao Biyan Capsule in combination with mometasone furoate nasal spray to treat allergic rhinitis, and found that the treatment of allergic rhinitis patients with mometasone furoate nasal spray and Tongqiao Biyan Capsule can improve the treatment effect, reduce the incidence of adverse reactions, improve the clinical symptoms of patients, and improve their treatment satisfaction. Scholar Wang Lina et al. (2021) chose the combination of Biyuan Tongqiao Granules and Loratadine Tablets to treat allergic rhinitis. Finally, they concluded that the combination of Biyuan Tongqiao Granules and Loratadine Tablets has a significant effect on treating allergic rhinitis, improving nasal symptoms and ventilation function, reducing the diurnal variation rate of PEF, alleviating inflammatory reactions, and being relatively safe. Qu Tongfei et al. (2020) selected the combination of Biyuan Tongqiao granules and mometasone furoate nasal spray to treat allergic rhinitis, and found that the combination of Biyuan Tongqiao granules and mometasone furoate nasal spray can effectively regulate serum inflammatory factor levels, promote clinical symptom relief, and im-

prove the quality of life of patients in the treatment of allergic rhinitis. In addition, Hoshino M, Akitsu K, Ohtawa J, et al. (2024) randomized 140 asthma and allergic rhinitis patients sensitized to HDM to receive 5-year drug therapy alone or drug combination SLIT treatment.

In summary, research on the combination of traditional Chinese and Western medicine in the treatment of allergic rhinitis has shown that the combination of traditional Chinese and Western medicine can leverage their respective advantages and improve the effectiveness of treatment. For example, some studies have shown that the combination of traditional Chinese medicine and Western medicine can more effectively improve the clinical symptoms of allergic rhinitis, reduce adverse drug reactions, and improve the quality of life of patients. In addition, some studies have also explored the mechanism of combining traditional Chinese and Western medicine in the treatment of allergic rhinitis, providing a theoretical basis for further in-depth research and clinical application.

5. Summary and Outlook

Traditional Chinese and Western medicine have their own advantages and unique treatment mechanisms in the treatment of allergic rhinitis. Based on the existing research results of traditional Chinese and Western medicine, we can conclude that traditional Chinese medicine has certain therapeutic effects in the treatment of allergic rhinitis. At the same time, breakthroughs have been made in the application of Western medicine in the treatment of allergic rhinitis. The combination of traditional Chinese and Western medicine has broad application prospects in the treatment of allergic rhinitis, but further research and practical verification are still needed. At present, there are still some problems in the combined treatment of traditional Chinese and Western medicine for allergic rhinitis, such as the lack of a unified treatment plan and incomplete understanding of the interaction mechanism between drugs. Therefore, in the future, it is necessary to further strengthen clinical research on the combination of traditional Chinese and Western medicine in the treatment of allergic rhinitis, in order to verify its effectiveness and replicability, and provide necessary references for improving the clinical symptoms of patients.

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