

Clinical Effect of Intranasal Corticosteroids Combined with Nasal Irrigation in the Treatment of Allergic Rhinitis

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Abstract: Objective: To explore the clinical effect of intranasal corticosteroids combined with nasal irrigation in the treatment of allergic rhinitis. Method: 100 patients with allergic rhinitis who received treatment in Shaanxi Provincial People's Hospital from January 2020 to January 2021 were selected as the research subjects. The grouping method adopts a random approach, dividing 100 patients into two groups with 50 patients in each group. They are the control group and the experimental group, respectively. The control group patients were treated with conventional intranasal corticosteroids therapy. The experimental group patients were treated with intranasal corticosteroids combined with nasal irrigation. Two groups of patients are required to undergo treatment and follow-up for 3 and 6 months to compare their quality of life and nasal symptoms after receiving treatment. Result: The quality of life of the experimental group patients was significantly higher than that of the control group. The difference was significant ($P < 0.05$); The nasal symptoms of the experimental group patients were significantly reduced compared to the control group patients, with a significant difference ($P < 0.05$). Conclusion: The combination of intranasal corticosteroids and nasal irrigation can effectively improve the quality of life and nasal symptoms of patients with allergic rhinitis.

Keywords: Intranasal Corticosteroids; Nasal Irrigation; Allergic Rhinitis

1. Materials and Methods

1.1 General Information

We selected 100 patients who received treatment in Shaanxi Provincial People's Hospital otolaryngology department from January 2020 to January 2021 as the experimental subjects. Using a random allocation method, patients were randomly assigned to two groups. One group used conventional treatment methods, while the other group used intranasal corticosteroids combined with nasal irrigation treatment on the basis of conventional treatment methods. The control group patients were treated with conventional treatment methods, while the experimental group patients were treated with intranasal corticosteroids combined with nasal irrigation. Collect relevant data through follow-up surveys for 3 and 6 months to understand the patient's disease recovery and quality of life after receiving treatment. There were 28 males and 22 females in the control group. The average age is (34.14 ± 3.22) years old; There were 27 males and 23 females in the experimental group, with an average age of (38.01 ± 2.01) years. There was no significant difference in gender, age, and other aspects between the two groups of patients ($P > 0.05$), indicating comparability.

1.2 Method

The patients in the control group were treated with intranasal corticosteroids, 2.56 μ g/d Budesonide nasal spray, and

instructed to spray twice on both nostrils. Two weeks later, the spray dose was reduced. The course of treatment was one month, and the follow-up investigation and return visit were three months and six months. On the basis of intranasal corticosteroids therapy, patients in the experimental group were given nasal irrigation. The specific steps were as follows: select the same type of washer, add it to 250mL of physiological saline (40 °C), and instruct patients to wash both nasal cavities after waking up in the morning and before going to bed at night. Use spray agent (ensure the same model) for injection. Spray twice into both nasal cavities, once a day, continuously for a month. Rinsing method: Instruct the patient to tilt their head forward, slowly and gently place the head of the washer on the outside of the nostrils, and inform the patient to open their mouth slightly during rinsing. Do not swallow saliva or speak, and breathe slowly with their mouth. The rinser squeezes the washer balloon, injects 40 °C physiological saline into the nasopharynx and one side of the nasal cavity, and then flows out through the other side of the nasal cavity or mouth. Move the head of the washer away from the nostril and use the same method to clean the other side of the nasal cavity. Patients are required to undergo follow-up surveys and research for 3 and 6 months, respectively. Maintain a follow-up level and record the patient's nasal recovery and quality of life after treatment.

1.3 Observation indicators:

(1) Observe and compare the quality of life of two groups of patients after treatment. This includes emotional issues, behavioral issues, sleep quality, and daily activities. (2) Observe and compare the nasal symptoms of two groups of patients after treatment. This includes runny nose, sneezing, itchy nose, and nasal congestion.

1.4 Statistical methods

Analyzing using SPSS 20.0 software. The counting data is represented by ($x \pm s$), t-test is used, and the measurement data is represented by (%). Selecting 2-test ($P < 0.05$) indicates the existence of differences and comparability.

2. Results

2.1 Comparison of VAS scores for nasal symptoms between two groups of patients before and after treatment

Before treatment, there was no statistically significant difference in VAS scores of nasal symptoms between the two groups of patients ($P > 0.05$); After 3 months of treatment, the VAS scores of nasal symptoms (nasal congestion, itching, sneezing, and runny nose) in both groups of patients decreased significantly compared to before treatment ($P < 0.05$), and the VAS scores of all symptoms in the experimental group were lower than those in the control group ($P < 0.05$).

2.2 Comparison of RQLQ scores between two groups of patients before and after treatment

Before treatment, there was no statistically significant difference between the two groups in nasal symptom scores, eye symptom scores, non nasal eye symptom scores, daily activity scores, sleep problem scores, behavioral problem scores, and emotional problem scores ($P > 0.05$); After treatment, the RQLQ scores of both groups were significantly improved. Except for sleep and behavioral problems, the RQLQ scores of the control group were lower than those of the experimental group ($P < 0.05$).

2.3 Comparison of treatment effectiveness between two groups of patients

After 3 months of treatment, the effective rate of treatment in the experimental group (94.12%) was significantly higher than that in the control group (81.67%) ($P < 0.05$).

3. Discussion

In recent years, the incidence rate of Allergic rhinitis is rising. The clinical manifestations of patients with Allergic rhinitis include nasal congestion, nasal itching, runny nose, sneezing and other symptoms. The disease can only be alleviated

by drugs in clinical practice, but can not be eradicated. In this way, it will bring huge living and economic burdens to the families of patients. Allergic rhinitis is a complex and hereditary disease. Mainly caused by immunoglobulin mediators. The participation of cytokines and immune active cells in the body leads to. At present, how to control or thoroughly cure Allergic rhinitis is the focus of clinical research. The current main research focus is on avoiding allergen exposure. Reasonably use intranasal corticosteroids or complete nasal cleaning. By using various intranasal corticosteroids, completing treatment work can effectively control the symptoms of allergic rhinitis. intranasal corticosteroids data is the main method of current treatment work, but if this method is used for a long time, patients will be affected by some side effects, which will lead to rejection of disease treatment. Compared to traditional treatment methods, changing the use of nasal irrigation has the characteristics of safety and simple operation, making it easier for patients to receive treatment during this process.

How to effectively control AR - straight is a hot research topic for otolaryngologists. Nasal glucocorticoid therapy is the most effective first-line treatment plan for AR, and ARIA guidelines strongly recommend it for treating AR. However, the side effects of long-term use of glucocorticoids make patients feel fearful and resistant, Moreover, for severe AR patients, the effect of nasal corticosteroids alone is not ideal. In recent years, nasal irrigation therapy has been widely used due to its simple operation, safety, and effectiveness, making it easier for patients to accept. Similarly, the efficacy of nasal irrigation alone for severe AR is also limited. This study conducted a Case-control study. The results showed that the nasal symptoms of the two groups were significantly improved after treatment, and the VAS scores of nasal congestion, nasal itching, sneezing and runny nose in the two groups were significantly lower than those before treatment ($P < 0.05$), and the scores of all symptoms in the experimental group were lower than those in the control group ($P < 0.05$); The treatment work requires completing follow-up studies for 3 and 6 months. By using combination therapy, the quality of life of the experimental group patients was significantly higher than that of the control group. Severe Allergic rhinitis patients will have edema of the internal nasal mucosa, which will lead to the narrowing of the patient's respiratory tract. A large amount of secretions may appear in the patient's nose. Traditional treatment methods cannot solve problems. The presence of various mucosal secretions in the patient's affected area ultimately affects drug reception. Physiological saline nasal irrigation has the effect of mechanically clearing nasal secretions, reducing local inflammatory factors, reducing mucosal congestion, and improving nasal mucociliary oscillation function. Fluticasone propionate has strong anti-inflammatory activity and little systemic activity when administered locally to the nasal mucosa. The combination of the two can play a synergistic role and achieve better clinical efficacy.

Through relevant research, it has been shown that the quality of life of the experimental group patients is better than that of the control group patients, with relatively mild nasal symptoms and better recovery effects. Therefore, this indicates that the combination of intranasal corticosteroids and nasal cleaning for the treatment of allergic rhinitis patients has better clinical efficacy, reduces patient symptoms, and fully utilizes its synergistic effect.

References

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