

Study on the Influence of Endoscopic Sinus Surgery in the Clinical Treatment of Chronic Sinusitis and Nasal Polyps

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Abstract: Objective: To analyze the influence of endoscopic sinus surgery in the clinical treatment of chronic Sinusitis and Nasal polyp. Methods: From February 2019 to February 2021, 100 patients with chronic Sinusitis and Nasal polyp who had been treated in otorhinolaryngology head and neck surgery in Shaanxi Provincial People's Hospital were selected and randomly divided into two groups. Patients with odd numbers were selected as the experimental group, while patients with even numbers were selected as the control group. The control group received conventional surgical treatment, while the experimental group received endoscopic sinus surgery. Compare the clinical efficacy, incidence of complications, and improvement of nasal symptoms between the two groups of patients. Result: The clinical effective rate of the experimental group was 96%, significantly higher than the 76% of the control group, and there was a statistical difference between the two groups ($P<0.05$); The incidence of postoperative complications such as nasal adhesion, bleeding, fever and Maxillary sinus ostium atresia in the experimental group was significantly lower than that in the control group ($P<0.05$); The Lund Kennedy score in the experimental group was significantly lower than that in the control group half a year after surgery, and there was a statistical difference between the two groups ($P<0.05$). Conclusion Endoscopic sinus surgery has significant clinical effect in the clinical treatment of chronic Sinusitis and Nasal polyp. It can effectively remove polyps, preserve the normal mucosa in the nasal cavity, and prevent complications. It has positive clinical significance.

Keywords: Chronic Sinusitis Nasal Polyp; Nasal Endoscopic Surgery; Application Effect; Treat

Introduction

Chronic Sinusitis Nasal polyp is one of the most common clinical diseases, usually manifested as nasal congestion, runny nose, decreased sense of smell, headache and other symptoms. The best treatment for this disease and the best treatment effect is surgery. However, due to the complex anatomy of the sinuses and certain individual differences, the difficulty of this surgery is significant, and patients may still experience a tendency to relapse after receiving the surgery. Traditional surgical patients have a high probability of recurrence and a lower willingness to receive it. With the rapid development of science and technology, nasal endoscopy is the most widely used nasal surgery in recent years. It has minimal damage to normal nasal structures, can avoid postoperative sinus scar formation, and reduce the impact on nasal and sinus ventilation and drainage function. This study further analyzed the effect of endoscopic sinus surgery in the clinical treatment of chronic Sinusitis and Nasal polyp.

1. Materials and Methods

1.1 General Information

From February 2019 to February 2021, 100 patients with chronic Sinusitis and Nasal polyp were randomly divided into two groups. The experimental group consisted of 50 patients, 28 males and 22 females, aged 24-65 years, with an average

age of (38.6 ± 4.6) years. The course of the disease ranged from 6 months to 7 years; The control group consisted of 50 cases, 19 males and 31 females, aged 24-69 years, with an average age of (40.3 ± 9.2) years and a course of disease ranging from 6 months to 6 years; All patients met the diagnostic criteria for chronic Sinusitis and Nasal polyp, and were diagnosed by sinus CT; Among them, there were 40 cases of type I, 28 cases of type II, and 32 cases of type III; All patients showed varying degrees of nasal congestion, purulent discharge, headache, etc; Excluding those who have merged with other nasal diseases; There was no statistically significant difference in age, gender, clinical classification, and course of disease between the two groups of patients ($P > 0.05$), indicating comparability.

1.2 Method

The control group was operated under the traditional front nasal endoscope. The patient took a sitting position and was clamped along the hypertrophic part of the lower end of the Inferior nasal concha with a vascular clamp for several minutes. The hypertrophic mucosa of the Inferior nasal concha was removed along the clamping edge with the lower turbinate scissors. After the common nasal passage was clear, the polypoid tissue of the middle nasal passage was exposed. The Nasal polyp snare was put into the root of the polyp, and forcedly clamped until the polyp tissue was completely removed. The nasal cavity was filled with Vaseline gauze to stop bleeding. The operation was completed. In the experimental group, nasal endoscopic surgery was used, general anesthesia or local infiltration anesthesia was used, Nasal polyp were removed under direct vision of nasal endoscope, and the tail end of uncinat process was removed as a whole. For mucosa edema, polyps and scar tissue at the sinus orifice, the sinus orifice needs to be expanded, so that the nasal drainage at the sinus orifice is unobstructed. For those with large occlusion of the frontal recess, complete resection was performed, and then the frontal sinus, ethmoid sinus and sphenoid sinus were treated, and the space between the mucosa and ethmoid sinus was preserved, The nasal cavity is filled with absorbable gelatin sponge and Vaseline gauze to stop bleeding. If the Nasal septum is deviated, the nasal cavity is filled with absorbable gelatin sponge and expansion sponge. Both groups were routinely treated with antibiotics for 3-5 days after surgery.

1.3 Evaluation criteria for efficacy

Recovery: The symptoms and signs completely disappear, the mucosa in the nasal cavity is completely epithelialized, without purulent secretions, and there is no recurrence of polyps within six months after surgery; Improvement: Symptoms and signs reduced by more than 50%, most of the mucosa in the nasal cavity became epithelial, with a small amount of purulent secretions; Invalid: No significant improvement in symptoms and signs, postoperative complications such as adhesions, blockage or stenosis of the sinus opening, large amounts of purulent secretions, and recurrence of polyps.

1.4 Observation indicators

Postoperative complications such as nasal adhesion, bleeding, fever and Maxillary sinus ostium atresia were recorded in both groups; The Lund Kennedy score was used to evaluate the postoperative symptom improvement of patients, with a total score of 20 points. The higher the score, the more severe the symptoms.

1.5 Statistical Analysis

The statistical software adopts SPSS 19.0 version, and the inter group measurement data adopts ($\bar{x} \pm s$) represents, row χ^2 -test, t-test for measurement data, with $P < 0.05$ indicating statistically significant differences.

2. Results

2.1 Comparison of clinical efficacy between two groups of patients

The clinical effective rate of the experimental group was 96%, significantly higher than the 76% of the control group, and there was a statistical difference between the two groups ($P < 0.05$).

2.2 Comparison of postoperative complications between two groups of patients

The incidence of postoperative complications such as nasal adhesion, bleeding, fever and Maxillary sinus ostium atresia in the experimental group was significantly lower than that in the control group ($P<0.05$).

3. Discussion

Chronic Sinusitis and Nasal polyp are recurrent and difficult to heal. The onset of chronic sinusitis is closely related to proliferative inflammation in the nasal cavity. Surgical removal of polyps is the most effective treatment method. Nasal endoscopic surgery allows the surgeon to operate under direct vision throughout the entire process, expanding the surgical field of view, improving clarity, and clearing away pathological tissue and mucosal epithelial hyperplasia in the nasal cavity as much as possible. It maximizes the preservation of normal mucosal tissue in the sinuses and maintains normal physiological function of the nasal cavity. At the same time, the sinus ostium should be fully opened during the operation, so that the lesions can be fully exposed and effectively removed, and the concealed parts of the frontal recess area can also be effectively cleared, so that the nasal passage of the sinus ostium can be smoothly drained, the time of sinus cavity epithelization after the operation can be shortened, which is conducive to the recovery of nasal ventilation function, and can ultimately eliminate the symptoms of Sinusitis and Nasal polyp. After surgery, nasal packing is usually removed within 24-48 hours. Antibiotics and steroids are routinely used, and nasal drops are administered daily to avoid frequent nasal flushing, in order to reduce postoperative nasal bleeding and mucosal epithelial damage. The case in this study was instructed by the doctor to undergo dressing changes under nasal endoscopy every 15-20 days after surgery, with a total of 3-7 changes. This achieved an ideal nasal epithelial state and effectively reduced the incidence of postoperative nasal adhesions. The results of this study showed that the clinical effective rate of the experimental group was 96%, significantly higher than the 76% of the control group, and there was a statistical difference between the two groups ($P<0.05$); The incidence of postoperative complications such as nasal adhesion, bleeding, fever and Maxillary sinus ostium atresia in the experimental group was significantly lower than that in the control group ($P<0.05$); The Lund Kennedy score in the experimental group was significantly lower than that in the control group half a year after surgery, and there was a statistical difference between the two groups ($P<0.05$). It is further proved that endoscopic sinus surgery is effective in the clinical treatment of chronic Sinusitis and Nasal polyp. One case of poor efficacy in the experimental group was also due to failure to adhere to medication and dressing change as instructed, which led to nasal adhesion and recurrence of Nasal polyp. Therefore, adhering to medical advice and standardized dressing changes after surgery plays an important role in the effectiveness of the surgery.

4. Summary

To sum up, endoscopic sinus surgery has a significant effect in the clinical treatment of chronic sinusitis and nasal polyps, which can complete the thorough removal of lesions within the nasal cavity, have a small impact on normal nasal tissue, facilitate the smooth drainage of the ostium, and restore the normal ventilation function of the nasal cavity.

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