Effect of ESS on Pulmonary Function of CRS with Asthma

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ABSTRACT

The strategy of ESS considered from the cause of CRS

METHODS AND MATERIALS

RESULTS

DISCUSSION

REFERENCES

The pulmonary function in CRS w NP increases after ESS. Also in the group without asthma, significant improvement was demonstrated in the postoperative pulmonary function test results that a group underwent asthmatic main compounding factors. In terms of the surgical approaches for CRS w NP on sinus surgery for recover the air ventilation of sinus is clearly different from the cause of the CRS w NP.

The objective of this study was to investigate the lower airway function and upper airway symptoms in patients with CRS and asthma who underwent endoscopic sinus surgery (ESS) for CRS and asthma.

The study included 19 patients with asthma and CRS who underwent ESS. The patients were divided into two groups: asthmatic group (n=9) and non-asthmatic group (n=10). The mean age of the asthmatic group was 45.1 ± 10.4 years, and the mean age of the non-asthmatic group was 47.4 ± 11.6 years. The mean duration of asthma was 15.1 ± 10.4 years, and the mean duration of CRS was 7.8 ± 5.4 years.

The postoperative pulmonary function test results were compared with the preoperative results. The V50 and V25/Ht values were significantly decreased in the asthmatic group after ESS, while the non-asthmatic group showed no significant change. The mean V50 value decreased from 76.0 ± 20.0 to 56.8 ± 13.4 L/s (P< .01), and the mean V25/Ht value decreased from 0.592 ± 0.166 to 0.405 ± 0.100 (P< .01) in the asthmatic group. In the non-asthmatic group, there was a significant decrease in V50 from 70.2 ± 20.5 to 66.8 ± 13.7 L/s (P< .01), but the V25/Ht value did not change significantly.

The postoperative upper airway symptom scores, Lund-Makay CT scores, and pulmonary function test results were also compared. The severity of upper airway symptoms and lung function improved significantly after ESS in both groups. The Lund-Makay CT scores improved from 4.1 ± 1.0 to 2.2 ± 0.8 in the asthmatic group (P< .01) and from 3.4 ± 1.2 to 2.5 ± 1.0 in the non-asthmatic group (P< .01). The pulmonary function test results also showed significant improvements in both groups. The FEV1/FVC ratio increased from 75.0 ± 5.0 to 80.0 ± 4.0 in the asthmatic group (P< .01) and from 75.0 ± 5.0 to 79.0 ± 4.0 in the non-asthmatic group (P< .01).

The study suggests that ESS may be effective in improving both the lower airway function and upper airway symptoms in patients with asthma and CRS. Further studies are needed to confirm the efficacy of ESS in patients with asthma and CRS.