

ORIGINAL ARTICLE

Intraturbinal versus extraturbinal microdebrider-assisted inferior turbinoplasty: Preliminary results

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Endoscopic; Microdebrider; Turbinoplasty; Intraturbinal; Extraturbinal

Abstract Objective: To compare the intraturbinal use of the microdebrider with the extraturbinal one for inferior turbinate reduction based on subjective and objective parameters.

Design: Prospective single blinded randomized trial.

Setting: Private Hospital (Magrabi Eye and Ear Centre).

Methods: Forty patients with nasal obstruction due to bilateral hypertrophied inferior turbinates were included in this study. History taking, clinical assessment and CT scan of the paranasal sinuses were done for all patients. All patients underwent microdebrider-assisted inferior turbinoplasty, the microdebrider was used intraturbinally on one side of the nose and extraturbinally on the other side in alternate manner. The patients were blinded to the technique used.

Main outcome measures: Operative time, blood loss, subjective improvement of the nasal obstruction, endoscopic grading of the inferior turbinate, nasal mucociliary clearance (NMCC) and post operative complications. **Results:** Ten patients were lost to follow up. The operative time and operative blood loss were less in the extraturbinal group ($p < 0.05$). At 1 month post operatively, the nasal obstruction VAS score showed significant improvement on the intraturbinal sides only ($p < 0.05$), at 3 and 6 months post operatively, the VAS score showed significant improvement on both sides with no difference between the 2 groups (p value = 0.064 and 0.728 respectively). Nasal endoscopy revealed grade 2 turbinates in 30% and grade 3 in the remaining 70% of the intraturbinal group with almost similar findings in the extraturbinal group. At 6 months post operatively, significant improvement of the turbinate size was detected on both sides. The NMCC showed significant improvement on the intraturbinal sides at 1 month with significant worsening on the extraturbinal sides. At 3 months, both sides showed significant improvement of the NMCC. No complications were reported in either group. **Conclusions:** Extraturbinal microdebrider-assisted inferior turbinoplasty is as effective and safe as the intraturbinal one with shorter operative time and less blood loss with similar morbidity, so the extraturbinal microdebrider-assisted inferior turbinoplasty could be a good option for all cases of inferior turbinate hypertrophy reserving the intraturbinal technique for patients with possible delay of mucosal regeneration e.g. diabetics and old age and patients not accepting the relative delay of improvement of their symptoms.

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