International session 3

IS3-1  High-intensity focused ultrasound (HIFU) as a new device for treatment of inferior turbinate hypertrophy: Comparison study with Coblation

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Introduction: Various procedures are performed for patients with inferior turbinate hypertrophy (ITH). We developed a new surgical device for the treatment of ITH that uses high-intensity focused ultrasound (HIFU), and performed a clinical trial of patients with ITH.

Method: A total of 20 patients underwent inferior turbinate surgery, which consisted of either HIFU or coblation therapy. Efficacy was evaluated by subjective symptom scores, acoustic rhinometry, and nasal endoscopy.

Results: The modified nasal obstruction symptom evaluation (NOSE) score and nasal obstruction visual analog scale (NO-VAS) were significantly decreased in both groups 12 weeks postoperatively. Differences between the evaluation scores of the two patient groups were not significant. On nasal endoscopy, the HIFU patients showed improvements in mucosal swelling sooner than the patients undergoing coblation therapy. Nasal crusting was significantly increased in the patients undergoing coblation over the patients undergoing HIFU therapy, until postoperative week 4. Mucosal preservation was superior in the HIFU patients. Although HIFU was less painful than coblation therapy during the procedure, the difference was not significant (4.9 vs 6.3, \( p=0.143 \)). The difference between global satisfaction in the two groups was not significant, although satisfaction was slightly greater for the HIFU than the coblation patients (4.6 vs 4.1, \( p=0.393 \)).

Conclusion: HIFU provided results similar to those of coblation therapy for patients with nasal obstruction due to ITH, but HIFU therapy caused less discomfort during the procedure. HIFU therapy appears to be a good non-invasive alternative to the current surgical modalities for ITH.

Curriculum Vitae

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Analysis of the bony nasal vault for osteotomy in rhinoplasty

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Introduction: Osteotomy is one of the most traumatic but critical procedures in rhinoplasty. A detailed preoperative analysis of the bony nasal vault is essential to perform a successful osteotomy. We aimed to analyze the bony wall thickness along the osteotomy path in primary rhinoplasty patients.

Method: We analyzed preoperative three-dimensional facial bone computed tomography images of 250 patients who underwent primary rhinoplasty and categorized their bony nasal vault based on symmetry. We measured the bony wall thickness at three points along the lateral and two points along the medial and intermediate osteotomy paths.

Results: A total of 240 patients were included in the analysis. Based on the symmetry of the bony nasal vault, 78 (32.5%) were categorized as an asymmetric, and 162 (67.5%) were categorized as a symmetric group. The mean thickness of the bony nasal vault was 2.31 ± 0.46 mm at the caudal point, 2.58 ± 0.44 mm at the mid-point, and 2.16 ± 0.43 mm at the cephalic point along the lateral osteotomy path. The bony nasal vault was thicker in male than in female patients at all points of medial and lateral osteotomies (p<0.05). In the asymmetric bony nasal vault, the deviated side was thicker than the contralateral side along all osteotomy paths (p<0.05). In addition, the deviated side was thicker, and the contralateral side was thinner than the symmetric bony nasal vault at specific points.

Conclusion: The thickness of the bony nasal vault differs according to the osteotomy path and gender. Special attention is needed during the lateral osteotomy, especially at the mid-point of the deviated side in male patients, to achieve a more controlled fracture.
Many Asians have noses with a broad alar base. Alar base surgery create an aesthetically balanced alar base is an important supplementary surgical technique in rhinoplasty performed on Asian patients. For proper assessment of the nasal base width, a clear distinction should be made between the width of the alar base and the degree of alar flare.

Nasal sill reduction which involves the complete resection of skin and underlying soft tissues at the location of the nostril sill made the alar base narrower.

Lateral alar reduction from the base of the alar lobule to just above the alar facial groove will improve excessive alar flare, but will not narrow the nostril.

Our goal is to accomplish a natural result and preserve the natural curvature of the lateral alar and function. Regardless of the type of modification, a conservative approach to alar base refinement is essential.

Nasal base modification can improve nostril shape and orientation, reduce alar flaring, improve nasal base width, correct nasal hooding, improve symmetry and create overall facial harmony.

For the correction of alar rim deformities, careful examination, consultation, analysis and consider the condition of the skin are essential. Understanding of the ala and surrounding tissue, supporting of lower lateral cartilage, selecting the proper technique produces functionally and aesthetically good results.
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IS3-4  Using reused nasoseptal flap for skull base reconstruction in endoscopic endonasal approaches

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Introduction: In the past two decades, significant anatomic and technical advances have facilitated the exposure and resection of skull base lesions via fully endoscopic expanded endonasal approaches (EEA). Nasoseptal flap had become a reliable material in the reconstruction of primary skull base defects. However, one limitation in the setting of revision surgery is the need for additional reconstructive options. In this study, we provide the experience with reused nasoseptal flap and report the effectiveness of this reconstruction technique.

Method: This study collected patients who underwent EEAs in our hospital from July 2015 to June 2022 and used a reused nasoseptal flap during the operation. Retrospective analysis of the surgical procedures, tumor type, surgical reconstruction method, postoperative nasal morbidity, and postoperative CSF leakage rate.

Results: A total of 14 patients and 16 surgeries were included in this study. The male to female ratio is 1:1.8, and the average age is 42 years old. Of these, 37.5% were craniopharyngiomas, 25% were pituitary adenomas, and 12.5% were Cushing’s disease. The reasons for the second skull base surgery were revision surgery (8 surgeries), staging surgery (4 surgeries), CSF leak repair (3 surgeries), and nasal septal flap reposition (1 surgery). No postoperative CSF leakage, nasoseptal flap necrosis or postoperative bleeding occurred in all cases. All patients (100%) had postoperative nasal crusting which resolved in an average of 72 days. More than half of the patients (58%) had transient nasal discharge after surgery.

Conclusion: The results of this study showed that the reused nasal septal flap had a high survival rate (100%), and minimal nasal morbidity. It is safe to use the reused nasal septal flap for revision endonasal skull base surgery.
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**IS3-5 L septoplasty for the caudal and high dorsal deviation**

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Introduction: In general, deviation of the L-strut of the nasal septum is more challenging to correct than the middle and has less favorable results. This study aimed to develop a technique to correct the L-strut while preserving nasal support effectively and introduce the L-septoplasty technique and its effects.

Method: Patients with caudal and high dorsal septal deviations who underwent the L-septoplasty technique were retrospectively analyzed. Preoperative and three-month postoperative comparative assessments included the Nasal Obstruction Symptom Evaluation (NOSE) scale and minimal cross-sectional area (MCA).

Results: Thirty patients seen at a tertiary care center were included. NOSE scale scores improved from 47.2 to 13.6, which was statistically significant \( P < .001 \). MCA increased from 0.43 cm\(^2\) to 0.74 cm\(^2\) \( P < .001 \). During the 3-month follow-up period, deviation correction was well maintained in all patients, and no surgical complications, such as saddle nose deformity, occurred.

Conclusion: The L-septoplasty technique is effective in simultaneously correcting caudal and high dorsal septal deviations without any complications.