

Prospective controlled study of nasal septum deviation impact on nasal obstruction

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Abstract

Objectives: To assess the relation between the type of nasal septum deviation and the degree of subjective complaint of nasal obstruction. **Methods:** One hundred healthy controls and one hundred-fourteen septoplasty patients were investigated for nasal obstruction using endoscopic examination and Nasal Obstruction Symptom Evaluation (NOSE) scale. Septal deviations were classified as septal spur, C or S shape deformity at coronal or axial plane and combined deformity. The degree of septal deviation was assessed, whether the septal deviation was in contact with lateral nasal wall or not. **Results:** Septoplasty patients showed to have higher NOSE scores when compared to the controls. According to multiple comparison test results, patients with septal spur had significantly lower NOSE scores compared with patients with different type of septal deformity (septal spur 45.00(SD=15.80) vs. C type deformity 60.95(SD=15.25), S type deformity 63.40(SD=14.95), combined deformity 76.25(SD=8.55), $p<0.05$). There was no significant difference in NOSE score according to septal deviation degree, whether the septal deviation contacts with the lateral nasal wall or not. After septoplasty the mean intervention groups' NOSE score improved from 61.30(SD=17.20) points to 17.00(SD=15.45) points ($p<0.01$). **Conclusions:** Septal deviation, regardless of the anatomical location or shape of deviation results in impaired nasal breathing when measured by NOSE scale and compared to population average. Septal spur deformity causes significantly lower NOSE scores when compared with C or S type deformity, or combined deformity, indicating that patients with septal spur express milder symptoms of nasal obstruction. After septoplasty patients' breathing improves significantly despite the type and location of septal deformity.

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