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Abstract

Thoralf Stange: Subjective assessment of the size of nasal septal defects compared to objective measurement

Background: The only causal treatment of a nasal septal defect is surgical septal reconstruction. For the exact preoperative assessment of the prognosis of a complete closure as well as for the planning of the surgical technique, it is very important to know the exact size of the defect as well as the septum height in the defect area. This knowledge would ensure comparability of the different surgical techniques and size progression could be accurately determined during the course of the disease.

Methodology: From 2016 to 2020, a total of 689 patients with nasal septal defects were presented in the rhinosurgical department of the ENT Centre Neuss. A subjective assessment of the septal defects in the millimeter range (height, width, septum height in the defect area) was performed for all of them. In 545 of these cases, the defect size could be accurately measured on the basis of the cone beam CT images and in 51 cases with the help of CT scans.

Results: Only in 17 % of the cases did the subjective size estimation of the septal defects correspond to some extent with the objective values (+/- 3 mm) measured on the X-ray images. In 52 % the subjective estimate was too small and in 31 % too large. The deviations were between 4 and 12 mm. There were particularly high deviations in the estimation of the septum height in the defect area and in the defect length.

Conclusions: A preoperative classification of nasal septal defects based only on a subjective assessment of their size is extremely prone to error. Therefore, at least for defect sizes in the borderline range - between type II and type III - an exact preoperative measurement should always be made with the help of a cone beam CT.