

Quality of life assessment septoplasty in patients with nasal obstruction

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Abstract

Nasal obstruction is a common complaint in the population. When caused by a deviated nasal septum, septoplasty is the procedure of choice for treating these patients. NOSE is a tool for assessing the disease-specific quality of life related to nasal obstruction.

Aim: To assess the impact of septoplasty on patients with nasal obstruction secondary to deviated nasal septum based on the disease-specific quality-of-life questionnaire. Design: Prospective.

Methods: Patients undergoing septoplasty with/ without turbinectomy after no clinical improvement with medical treatment were assessed by the NOSE questionnaire before and 3 months after surgery. We evaluated the surgical improvement based on total score, the magnitude of the surgery in the disease-specific quality of life and the correlation between the preoperative score and postoperatively improvement.

Results: Forty-six patients were included in the study. There was a statistically significant improvement in the preoperative NOSE score (md = 75, IQR = 26) and after three months (md = 10, IQR = 20) ($p < 0.001$, T-Wilcoxon). The standardized response mean was 3.07. We found a strong correlation between the preoperative score in the NOSE questionnaire and improvements in the postoperative period ($r = -0.789$, $p < 0.001$, Spearman). No difference was found in improvement scores by gender. ($p = 0.668$, U-Mann-Whitney).

Conclusion: Septoplasty resulted in a statistically significant improvement in the disease-specific QOL questionnaire.

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INTRODUCTION

Nasal obstruction is the feeling of blockage or insufficient air flow through the nose, and it can impact significantly on the individual's Quality of Life (QL). Its prevalence is 26.7% in urban centers¹. Many are the causes for nasal obstruction, such as: rhinitis, adenoid hypertrophy, turbinate hypertrophy and sinonasal polyps. Nasal septum deviation is a very common cause of nasal obstruction, of simple diagnosis and ultimate treatment is based on septoplasty.

There is a tool used for the objective assessment of nasal obstruction: the NOSE² questionnaire. After numerous studies published about the treatment of this complaint, with non-validated questionnaires³⁻⁵, Stewart et al. published the "Nasal Obstruction Symptom Evaluation Scale" in 2004². Questionnaire validation to assess the disease-specific QL is an important means used to assess disease impact and patient treatment. In 2010, we published the transcultural and validation processes of this QL questionnaire for Brazil in an international journal⁶, with an established methodology concerning validation processes⁷ used for other QL questionnaires published for our language⁸. It is essential to have this stage prior to the use of a QL questionnaire developed in another language, because we need to culturally adapt it and validate it, instead of having a simple translation of it. This was the first otolaryngology validation in Brazil to use this international detailed and consolidated methodology, with the participation of the author of the original questionnaire². This methodology avoided possible biases that could have happened should we have applied a simple translation.

There are some national studies which assessed the efficacy of nasal surgery to treat nasal obstruction; however, none of them used an instrument to evaluate disease-specific QL issues associated with nasal obstruction^{9,10}. This is the first Brazilian publication to use the validated version of the NOSE questionnaire.

The goal of the present paper is to assess the impact of septoplasty on the disease-specific quality of life of the patients with nasal obstruction secondary to a nasal septum deviation.

PATIENTS AND METHODS

Study design

This is a prospective study. All the patients agreed with the informed consent and signed the form

which was authorized by the Ethics Committee of the Hospital (nº. 0521/08).

The primary goal of this study was to assess those patients with nasal obstruction who were submitted to septoplasty with or without turbinectomy, to treat nasal septum deviation, with or without hypertrophy of the inferior nasal conchae, respectively, as to improvements in the disease-specific QL, measured by the NOSE questionnaire three months after surgery.

Secondary goals were: to assess the correlation between the NOSE questionnaire pre-operative scores and the score variation after three months of the surgery; and to assess whether there is a differences in the disease-specific QL improvement according to gender.

Patient Samples

The patients were consecutively recruited between June of 2008 and March of 2009. We used the following inclusion criteria: patients with chronic nasal obstruction caused by nasal septum deviation with or without nasal conchae hypertrophy; symptoms persisting for over 12 weeks; no response to the clinical treatment with topical steroids and anti-histaminic agents associated with nasal decongestants (only for patients with concurrent allergic rhinitis); surgical indication for septoplasty and age above 18 years.

We took off those patients with a history or diagnosis of sinonasal tumors; head and neck radiotherapy; septoplasty done with rhinoplasty or as an entry point to other sites; anterior nasal surgery; chronic rhinosinusitis (according to the criteria from EP3OS 2007)¹¹; nasal septum perforation; craniofacial congenital bone changes; nasal trauma or fracture; adenoid hypertrophy; sarcoidosis or another Granulomatosis; asthma without clinical control; gestation.

Treatment

Septoplasty is defined as an open surgery of the nasal septum with the goal of straightening it. The use of postoperative splints or nasal packing was not mandatory, nor evaluated.

The patients were submitted to septoplasty with or without inferior turbinectomy by resident ENT physicians from our department, according to the evaluation from the attending physician in indicating the surgery. The patients were independently evaluated by means of the NOSE questionnaire and the physician responsible for the patient was blind as

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