# Septoplasty Outcomes in Patients With and Without Allergic Rhinitis

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## Introduction

- Allergic rhinitis (AR) is an extremely common disease process affecting approximately 20-30 percent of the population\(^1\).
- It is well documented that septoplasty improves quality of life in patients with nasal obstruction\(^2\).
- There is little research however examining the outcomes of septoplasty specifically in patients with co-existing AR as compared to the non-AR population.

## Objectives

- To examine nasal obstruction and quality of life outcomes of primary septoplasty in patients with AR as compared to those without AR at 3 and 6 months post-operatively.
- To examine patient satisfaction with their post-operative outcome.

## Methods

- Prospective analysis of 51 patients with nasal obstruction and nasal septal deviation.
- AR defined by 2008 ARIA guidelines\(^3\).
- Patients with prior nasal surgery were excluded from the study.
- All patients received both septoplasty and inferior turbinectomy.
- NOSE, mini-Rhinocconjunctivitis Quality of Life Questionnaire (m-RQLQ) a 11 point Ease-of-breathing (EOB) scale, and a 5 point satisfaction scale were used pre-operatively and at 3 and 6 months post-operatively.
- Analysis with paired and student t-tests.

## Results

- 51 patients enrolled, with 49 (96%) responding at 3 months postop, and 44 (86%) responding at 6 months.
- 19 (37%) patients had AR and 32 (63%) patients did not.
- 93% of patients were satisfied to very satisfied with their surgical outcomes at 6 months.
- There was a clinically and statistically significant improvement between pre and post-operative NOSE, m-RQLQ, and EOB measures for both AR and non-AR patients which was sustained at 3 and 6 months (p<0.05, see Figures 1,2,3).
- No significant difference between NOSE or EOB scores in AR vs. non-AR patients at 3 or 6 months post-operatively (p > 0.05, see Figures 1 and 3).
- For the m-RQLQ, baseline, 3 and 6 month scores were higher in the AR group compared to non-AR (p<0.05). However, the difference in the magnitude of change between the two groups (1.55 for AR vs. 1.44 for non-AR) does not reach clinical significance based on the known minimal clinically important difference (MCID) for the m-RQLQ.

## Discussion

- Patients with nasal obstruction from nasal septal deviation demonstrate significant improvement across all measures following septoplasty and inferior turbinate reduction regardless of comorbid AR.
- AR patients had higher m-RQLQ scores across all time points. This is expected as this tool measures allergy-specific quality of life. Nonetheless, AR patients received clinical and statistical improvement, and their magnitude of change did not differ in clinical significance when compared to the non-AR group.
- Previous studies suggest that AR patients may have attenuated improvement after septoplasty compared to non-AR patients\(^4\), but these data suggests that both groups receive significant and comparable improvement.
- Furthermore, this improvement is sustained 6 months post-operatively.

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**REFERENCES**