

POSTER 73

PREDICTORS OF TONSILLECTOMY AFTER PREVIOUS ADENOIDECTOMY FOR UPPER AIRWAY OBSTRUCTION

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Objective: One of the main indications for adenotonsillectomy in children is upper airway obstruction, including obstructive sleep apnea. Previous research has suggested an increased risk for requiring subsequent tonsillectomy when adenoidectomy alone is performed for upper airway obstruction. The purpose of this study is to further characterize potential risk factors for subsequent tonsillectomy in pediatric patients undergoing adenoidectomy for upper airway obstruction.

Methods: A retrospective cohort of patients undergoing adenoidectomy without tonsillectomy was examined using billing records and selected chart review. Kaplan-Meier plots and Cox regression analysis were utilized to determine the influence of age, sex, and obstructive indication on subsequent tonsillectomy. A nested case-control study with detailed chart review was then conducted for patients with upper airway obstruction to investigate potential risk factors.

Results: A total of 1307 patients under age 12 over a 15 year period were included in the cohort, 376 of these with upper airway obstruction. A total of 101 (7.7%) underwent subsequent tonsillectomy within an average of 2.2 years (range 0.3-5.3). No difference in tonsillectomy rates for obstructive versus non-obstructive indications were identified, which is contradictory to previous research. Younger age and female sex were associated with increased risk of subsequent tonsillectomy. Within the case-controlled study, the odds of tonsillectomy were increased by large tonsils and decreased by the presence of inhalant allergy.

Conclusion: Adenoidectomy without tonsillectomy may be an appropriate treatment for upper airway obstruction. Certain factors identify patients at higher risk of requiring a second procedure and should be considered during preoperative counseling.