
Impact of Partial and Total Tonsillectomy on Adenoid Regrowth

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Objectives/Hypothesis: To compare the rates of adenoid regrowth in children who underwent total tonsillectomy and adenoidectomy (TA) versus partial intracapsular tonsillectomy and adenoidectomy (ITA).

Study Design: Retrospective cohort study.

Methods: A medical database was used to retrieve the records of 5,120 children younger than 12 years of age who had an adenoidectomy in combination with a tonsil surgery between April 2008 and September 2014. Children who had symptomatic obstructive sleep apnea without a history of recurrent tonsillitis, and underwent an endoscopic adenoidectomy with a microdebrider, in addition to a traditional tonsillectomy or partial tonsillectomy with coblation, were included in the study. Adenoid regrowth was evaluated in the children who completed at least a 1-year follow-up. The sizes of adenoids were subjectively graded and reported based upon a numerical scale.

Results: In total, 1,504 and 1,340 children met the inclusion, and were comprised of ITA and TA groups, respectively. Adenoid regrowth was seen in 98 (7.3%) children in the TA group after 1-year follow-up. Symptomatic adenoid regrowth was seen in 19 (1.4%) children in the TA group. In the ITA group, although 71 (4.7%) children had adenoid regrowth, only one (0.06%) reached grade 3 hypertrophy that could be attributed to nasal obstruction at 1-year follow-up. Comparison of the regrowth rates of both groups at the end of the 1-year follow-up period showed a statistically significant difference ($P < .001$).

Conclusions: ITA seems to be a safe procedure with a low incidence of regrowth of adenoid tissue in children with adenotonsillar hypertrophy when compared to TA.

Key Words: Adenoidectomy, adenoidal regrowth, tonsillectomy, partial intracapsular tonsillectomy.

Level of Evidence: 4.