ORIGINAL ARTICLE

Systematic Review of Randomized Controlled Trials Comparing Intracapsular Tonsillectomy With Total Tonsillectomy in a Pediatric Population

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Objective: To perform a systematic literature review and data synthesis of level-1 evidence comparing recovery-related outcomes after intracapsular tonsillectomy (IT) (any technique) with those of total tonsillectomy (TT) (any technique) in a pediatric population.

Data Sources: Two independent reviewers searched the following databases: Ovid MEDLINE, including old MEDLINE and pre-MEDLINE, EBM reviews, Books@Ovid and Journals@Ovid, the Web of Science with Conference Proceedings, and references from indexed articles.

Study Selection: Inclusion criteria were randomized controlled trials conducted on a pediatric population comparing IT performed by any technique of dissection with TT, also performed by any technique of dissection. Two independent reviewers determined included trials with difference of opinion resolved by a third reviewer.

Data Extraction: Independent data extraction by 2 reviewers on the following outcomes: postoperative pain, analgesic use, recovery time, diet, bleeding rate, infection, and regrowth rate requiring further surgical intervention.

Data Synthesis: Heterogeneity of outcome measures and lack of reporting of raw data precluded formal meta-analysis. For quantitative data that could be extracted, pooled data analysis was performed using nonparametric tests.

Conclusion: Recovery-related outcomes for IT were superior to TT (secondary hemorrhage rate, number of days until pain free) in a pediatric population with obstructive symptoms (level-1 evidence).

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MUCH HAS CHANGED IN both the indications and techniques for performing tonsillectomy over the past 2 centuries. Guillotine tonsillectomy, originally introduced by Philip Physick in 1828,[1] was in effect a partial tonsillectomy, which was later superseded by total tonsillectomy (TT), performed with the same instrument, owing to concerns about recurrent infection in the residual tonsillar tissue.[2,3] Total tonsillectomy was described in 1906 and rapidly became the preferred method of tonsil excision using sharp dissection.[3] The introduction of electrosurgical devices in 1887 initially provided a means of improved hemostasis. Later, with the development of diathermy and nonvolatile inhalational anesthetics, electrocautery gained acceptance as a preferred method of tonsillar dissection.[4] More recently, surgeons have used the harmonic scalpel, laser, microdebrider, coblation, and radiofrequency, with the aim of reducing postoperative pain and morbidity.

Since the advent of antibiotics and improved guidelines for monitoring and observation of infection, the rate of surgery for infection has been declining, while sleep-disordered breathing has become the most common indication for tonsillectomy in the pediatric population.[5,6] In parallel with this development has been a renewed interest in the value of intracapsular tonsillectomy (IT). Its proponents cite equivalent outcomes for obstructive symptoms, with the possible benefit of reduced pain and morbidity because there is no breach of the tonsillar capsule or underlying pharyngeal musculature. The risks associated with this technique are infection in the tonsillar remnant and regrowth of tonsillar tissue.

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Over the past decade numerous clinical trials have been undertaken to compare IT with TT techniques for the relief of sleep-disordered breathing. Previous au-

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