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Effectiveness of Adenotonsillectomy in Children with Throat Infections or Tonsillitis.

Tonsillectomy remains the most commonly performed major surgical operation among United States children; in 1996, the most recent year for which national data are available, an estimated 287 000 children under 15 years of age underwent tonsillectomy with or without adenoidectomy. Of these, an estimated 248 000 children (86.4%) underwent adenotonsillectomy and an estimated 39 000 children (13.6%) underwent tonsillectomy alone. As an indication for tonsillectomy or adenotonsillectomy, current guidelines of the American Academy of Otolaryngology-Head and Neck Surgery list "Three or more infections of tonsils and/or adenoids per year despite adequate medical therapy."

Two recent clinical trials have cast considerable doubt on the usefulness of this procedure.

The first (1), by researchers from the Department of Paediatrics, Children's Hospital of Pittsburgh, Pittsburgh, Pennsylvania, aimed to determine, 1) whether tonsillectomy would afford equivalent benefit in children who were less severely affected than those in our earlier trials but who nonetheless had indications for tonsillectomy comparable to those in general use, and 2) whether, in such children, the addition of adenoidectomy would confer additional benefit.

The authors conducted 2 parallel randomized, controlled trials in the Ambulatory Care Centre of Children's Hospital of Pittsburgh.

To be eligible, children were required to have had a history of recurrent episodes of throat infection that met standards slightly less stringent than the standards used in our earlier trials. These reduced standards were nonetheless more stringent than those in current official guidelines. Of 2174 children referred by physicians or parents 328 were enrolled. Of these, 177 children without obstructing adenoids or recurrent or persistent otitis media were randomized to either a tonsillectomy group, an adenotonsillectomy group, or a control group and 151 children who had 1 or more such conditions were randomized to either an adenotonsillectomy group or a control group.

Outcome measures were the occurrence of episodes of throat infection during the 3 years of follow-up; other, indirect measures of morbidity; and complications of surgery. The authors found that only a modest benefit was conferred by tonsillectomy or adenotonsillectomy in children moderately affected with recurrent throat infection. The authors concluded that,

"The modest benefit conferred by tonsillectomy or adenotonsillectomy seems not to justify the inherent risks, morbidity, and cost of the operations, and that under ordinary circumstances, neither eligibility criteria such as those used for the present trials nor the criterion for surgery in current official guidelines are sufficiently stringent for use in clinical practice."

The second study (2), that has just been published in the British Medical Journal (Sept. 10), involved 300 children aged 2-8 years requiring adenotonsillectomy. In this open, randomised controlled trial the participants were drawn from 21 general hospitals and three academic centres in the Netherlands. Adenotonsillectomy was compared with watchful waiting.

The outcome measures were episodes of fever, throat infections, upper respiratory tract infections, and health related quality of life. After the median follow up period of 22 months, no statistically or clinically relevant differences were found for any of the outcome measures. The authors concluded that,

"Adenotonsillectomy has no major clinical benefits over watchful waiting in children with mild symptoms of throat infections or adenotonsillar hypertrophy."

References:

1. Paradise JL, Bluestone CD, Colborn DK, et al. Tonsillectomy and adenotonsillectomy for recurrent throat infection in moderately affected children. *Pediatrics*. 2002; 110:7-15.
2. Van Staaij BK, Akker EH, Rovers MM, Hordijk GJ, Hoes AW, Schilder AG. Effectiveness of adenotonsillectomy in children with mild symptoms of throat infections or adenotonsillar hypertrophy: open, randomised controlled trial. *BMJ*. 2004 Sep 10 [Epub ahead of print]