

EDITORIALS

Adenoidectomy in children with recurrent upper respiratory infections

Immediate surgery seems to offer no benefit over initial watchful waiting

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Although recurrent upper respiratory tract infections in childhood are self limiting, with high rates of spontaneous recovery,¹ they are associated with high healthcare costs and frequent visits to the doctor. Most of these infections are caused by viruses. Generally, they are associated with little morbidity but predispose children to complications such as otitis media, tonsillitis, and sinusitis, which cause further morbidity.² About a fifth of preschool children have recurrent upper respiratory tract infections, and many of these are referred to ear, nose, and throat surgeons for upper airway surgery, including adenoidectomy.^{3,4}

Adenoidectomy restores normal breathing through the nose if the hypertrophied adenoid obstructs the nasopharynx. It can also improve hearing in children with otitis media, but it has yet to show benefit on the occurrence of otitis media, physician visits, antibiotic prescription, or days with symptoms of upper respiratory infections in children under 2 years of age.⁵

In the linked study (doi:10.1136/bmj.d5154), Van den Aardweg and colleagues assessed the effectiveness of adenoidectomy in children selected for surgery on the basis of upper respiratory infections alone.⁶ The randomised controlled trial of 111 children aged 1-6 years compared immediate adenoidectomy, with or without myringotomy, with initial watchful waiting. The primary outcome was the total number of recurrent upper respiratory tract infections, defined as two or more of the following symptoms—fever, diary scored stuffiness or breathing through the mouth, nasal discharge, or cough—during the two years of follow-up. The study found no significant difference between the groups. Furthermore, no differences between groups were found in the secondary outcomes of total number of days with upper respiratory tract infections a year, days with fever, or health related quality of life.

The authors concluded that immediate surgery for upper respiratory tract infections has no benefit over watchful waiting. Currently, evidence on the benefits of adenoidectomy and internationally accepted guidelines are lacking in children with upper respiratory tract infections without additional symptoms of otitis media or sleep apnoea. A systematic review in 2010 of adenoidectomy in children identified only two randomised controlled trials that included upper respiratory tract infections

as an outcome.⁷ One was methodologically weak and the other included only children who primarily had otitis media.⁷

The generalisability of the results warrants consideration. Ear, nose, and throat surgeons in the respective hospitals diagnosed and selected eligible children. Because there are no internationally accepted guidelines for the diagnosis and treatment of recurrent upper respiratory tract infections, diagnosis is likely to vary between doctors. Furthermore, rates of adenoidectomy vary considerably nationally and internationally,^{8,9} and rates for recurrent upper respiratory infections alone have been estimated to be 12% in the United States and 60% in the Netherlands (<http://statline.cbs.nl/statweb>) over the past decade.¹⁰

Rates of upper respiratory tract surgery vary nationally and internationally. Clinicians seem to be similar in their uncertainty regarding indications for procedures, and variations in surgery rates among countries appear to be more characteristic for the procedure than for the country in which it is performed.⁸ To date, no consensus exists to help surgeons decide which children with upper respiratory tract infections will benefit from adenoidectomy. Accordingly, this lack of exact criteria for surgery may have affected the selection of children to surgery in the current study and also the primary and secondary outcomes in both study groups if the disease severity varied in the two treatment arms. Further studies are needed to replicate the authors' findings, to refine the study design in terms of higher specificity in diagnostic inclusion criteria for surgery, and finally to increase the sample size so that comparisons between different age groups can be made.

An important finding from Van den Aardweg and colleagues' study was the reduction in upper respiratory tract infections with time, irrespective of the treatment arm. This supports earlier findings that most upper respiratory infections are self limiting and decrease with age.¹ It also highlights the difficulty in selecting children for surgery because symptom severity often reduces as the child grows older. Information and knowledge sharing are becoming increasingly important in decision making, and they are especially important in childhood illness.¹¹ Because a common genetic liability for upper airway infections is well known,¹² and treatment for upper respiratory infections primarily aims to prevent complications such as tonsillitis, sinusitis, and

otitis media,² clinicians should be aware that children presenting with a family history of upper airway infections may be more vulnerable to recurrent infections. Careful follow-up and a strategy of watchful waiting seem prudent in the light of this study, especially because the incidence of upper respiratory infections declines with age.

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