Adenotonsillectomy marginally reduced sore throat episodes compared with watchful waiting in children


Clinical impact ratings GP/FP/Primary care

In children with mild symptoms of throat infections or adenotonsillar hypertrophy, is adenotonsillectomy more effective than watchful waiting?

**METHODS**

- **Design**: randomised controlled trial.
- **Allocation**: (concealed)†.
- **Blinding**: unblinded.
- **Follow up period**: median 22 months.
- **Setting**: 21 general hospitals and 3 academic centres in the Netherlands.
- **Patients**: 300 children who were 2–8 years of age (mean age 4.5 y, 51% girls) and required adenotonsillectomy. Exclusion: >7 throat infections in the preceding year with >5 in each of the previous 2 years or >3 in each of the previous 3 years, suspected obstructive sleep apnoea, Down’s syndrome, craniofacial malformations, or immunodeficiency other than IgA or IgG deficiency.
- **Intervention**: adenotonsillectomy (n = 151) or watchful waiting (n = 149).
- **Outcomes**: fever (temperature >38.0°C) for >1 day, throat infections, sore throat, upper respiratory tract infections, and health related quality of life.
- **Patient follow up**: 86% (intention to treat analysis).

*See glossary.
†Information provided by author.

**MAIN RESULTS**

Compared with watchful waiting group, adenotonsillectomy led to marginally fewer episodes of throat infections, sore throats, and upper respiratory tract infections per person year but did not reduce fever (table). Groups did not differ for health related quality of life.

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**Adenotonsillectomy v watchful waiting in children with mild symptoms of throat infections or adenotonsillar hypertrophy**

<table>
<thead>
<tr>
<th>Outcomes at median 22 months</th>
<th>Adenotonsillectomy</th>
<th>Watchful waiting</th>
<th>Difference (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of fever episodes per person year</td>
<td>2.97</td>
<td>3.18</td>
<td>−0.21 (−0.54 to 0.12)†</td>
</tr>
<tr>
<td>Mean number of throat infection episodes per person year</td>
<td>0.56</td>
<td>0.77</td>
<td>−0.21 (−0.36 to −0.06)</td>
</tr>
<tr>
<td>Mean number of sore throat episodes per person year</td>
<td>2.25</td>
<td>2.85</td>
<td>−0.60 (−0.90 to −0.30)</td>
</tr>
<tr>
<td>Mean number of upper respiratory tract infections per person year</td>
<td>5.47</td>
<td>6.00</td>
<td>−0.53 (−0.97 to −0.08)</td>
</tr>
</tbody>
</table>

*CI defined in glossary. †Difference not statistically different.

**CONCLUSION**

In children with mild symptoms of throat infections or adenotonsillar hypertrophy, adenotonsillectomy did not reduce fever incidence but marginally reduced throat infections, sore throats, and upper respiratory tract infections compared with watchful waiting.

**Commentary**

Parents usually report satisfaction after adenotonsillectomy, and parents and physicians often make the decision for surgery considering many factors other than obstructive sleep apnoea and frequency of recurrent infections. 1 Adenotonsillectomy has been shown effective for frequent, recurrent infections. 2 van Staaij et al explored whether adenotonsillectomy was more effective than watchful waiting in children with infrequent throat infections and mild symptoms of adenotonsillar hypertrophy.

They found only minor clinical improvements in the children randomised to adenotonsillectomy. The primary outcome, fever, was objective but non-specific. Fever episodes were not different in the 2 groups. Fever duration decreased by 0.6 days per year in the adenotonsillectomy group, although completeness of the daily fever measurements was not reported. Likewise, the secondary outcomes of sore throat, throat infections, and upper respiratory tract infections were marginally improved in the adenotonsillectomy group. Physicians and parents must decide whether these minor clinical benefits outweigh the anaesthetic and perioperative risks.

van Staaij et al acknowledge limitations in their study. The indications for surgery were unclear. Only 30% of eligible children were randomised; many parents insisted upon surgery. Furthermore, 34% of the watchful waiting group crossed over to adenotonsillectomy: parents apparently were more ‘watchful’ than ‘waiting.’ The generic quality of life instruments were not disease specific and thus may have missed clinically important dimensions of improvement. Although not available at the time this study began, 3 disease-specific quality of life instruments have now been reported. 3 Although adenotonsillectomy is not of major benefit for children with infrequent, recurrent tonsillar infections and mild symptoms of adenotonsillar hypertrophy, it continues to be the standard of care for children with moderate to severe obstructive sleep apnoea and helpful for those with frequent recurrent tonsillar infection.

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