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Tips from Other Journals

Antibiotics for Children with Otitis Media

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Background: Acute otitis media, one of the most common childhood infections, is a common justification for antibiotic prescriptions to children. Nevertheless, antibiotics provide only marginal benefit and to have several negative consequences (e.g., encouraging more frequent physician visits). Current clinical guidelines stress the use of antibiotics in children older than two years, but no consensus has been reached. Rovers and colleagues reviewed available evidence to better identify subgroups that might benefit from antibiotic therapy for otitis media.

The Study: The authors searched electronic databases and reviewed proceedings and symposia to identify high-quality clinical trials of otitis media in children. Of the 10 trials that met inclusion criteria, original data were provided by six trials involving 1,200 children. All data were validated and reanalyzed before entry into the meta-analysis. The outcome was pain, fever, or both persisting for three to seven days. Fever was defined as a documented temperature of 100.4° F (38° C) or higher. Pain was assessed by parent symptom diaries. Any documented adverse effect of treatment also was recorded. Predictive features of age younger than two years, bilateral otitis media, and from previous studies.

Results: The statistical analysis concluded that the overall relative risk for a child with otitis media (persisting symptoms for three to seven days) with antibiotics was 1.0. The number needed to treat (NNT) of eight children for one additional child to be free of fever, the NNT was 20; for pain, it was 10.

The effect of antibiotics was examined by age, bilateral disease, and the presence of otorrhea. The overall NNT for pain, fever, or both in children younger than two years was 10 for older children. The presence of otorrhea changed the NNT from eight to five. Infection changed the NNT from 17 to five. The effect of combining the two of age and unilateral versus bilateral disease is shown in [the accompanying article](#).

Conclusion: The authors conclude that antibiotics are most beneficial in children younger than two years who have bilateral disease, and in children of any age who have otorrhea. They do not believe that the current results indicate that all children benefit more from antibiotics than older children, as has been previously suggested. The authors call for more specific selection of children for early antibiotic therapy. Observation and symptomatic relief is appropriate for most children with mild otitis media.

Numbers Needed to Treat for Acute Otitis Media for Improvement to Seven Days

Younger than 2 years 2 to 12 years of age

Pain, fever, or both

| | | |
|------------|----|----|
| Bilateral | 4 | 9 |
| Unilateral | 20 | 15 |

Pain

| | | |
|------------|----|----|
| Bilateral | 5 | 8 |
| Unilateral | 50 | 25 |

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SOURCE

Rovers MM, et al. Antibiotics for acute otitis media: a meta-analysis with individual data. *BMJ*. 2000;321:1153-1157.
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