

REACH Notes

Recent Developments to Promote Judicious Antibiotic Prescribing

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Physicians, Nurse Practitioners, Physician Assistants

Last chance to attend a REACH Mass dinner meeting this fall! We've scheduled an additional meeting for Monday evening, December 9th at Benjamin's Restaurant in Taunton. Look for your invitation in the mail and register before Monday, December 2, 2002. Call Judith Chevarley at 617-509-9882 for more information.

Prophylactic antibiotics and tympanostomy tubes for recurrent AOM: no easy answers

- How well does long-term antibiotic prophylaxis work, and in what situations?
- How effective are tympanostomy tubes for prevention of recurrent AOM?
- Is recommended practice changing with increased antibiotic resistance?

Recurrent acute otitis media has generally been defined as 3 distinct episodes in 6 months or 4 episodes in 12 months. Both antibiotic prophylaxis and tympanostomy tube placement have been recommended for prevention of future episodes.

Antibiotic prophylaxis: A meta-analysis of trials to **reduce acute otitis media episodes** using continuous prophylaxis has shown a relatively small magnitude of impact of 0.11 infections per month (or roughly 1 per year).¹ Greatest benefit is seen in children with more frequent episodes, and the benefit was greatest during the first 6 months of treatment. This benefit must be weighed against the increased risk of carriage of a resistant organism in patients on prophylactic regimens. (Note: There is consensus that antibiotics are not indicated for initial treatment of otitis media with effusion (OME) or serous otitis.² For persistent OME (longer than 3 months) a trial of antibiotics is used by some, but on average, the benefit, if any, is small.

Tympanostomy tubes for recurrent AOM- a recent meta-analysis showed a reduction of approximately 1 episode per child per year of AOM, as well as improvements in pain and other symptoms over the short term. This, of course, must be balanced against anesthesia risk, and small risks of complications of the procedure.

Tympanostomy tubes are recommended for persistent OME (>3 months duration) **ONLY** in the presence of significant bilateral (20 db) hearing loss. A recent study found no differences between immediate tube placement vs. delay by up to 9 months on language development at age three.³

Implications: There are no new guidelines on the use of antibiotic prophylaxis or tympanostomy tube placement since the 1998 CDC Principles of Judicious Prescribing.² These recommend being certain that the diagnosis of recurrent AOM is clear (e.g. not just OME after recent AOM), and that criteria for the number of infections are met. The benefits of antibiotic prophylaxis and tubes are similar in magnitude. Parents must understand that the risk of carriage of a resistant organism is higher while on prophylaxis, and this must be weighed against the benefits of fewer infections and the risks of surgery for tympanostomy placement.

Reference List

1. Williams RL, Chalmers TC, Stange KC, Halmers FT, Owin SJ. Use of antibiotics in preventing recurrent acute otitis media and in treating otitis media with effusion. JAMA 1993; 270:1344-1351.
2. Dowell SF, Marcy SM, Phillips WR, □
3. Paradise JL, Feldman HM, Campbell TF, et al. Effect □ years. New Eng J Med 2001; 344:1179-1187.