

Letters

Letters to the Editor

Write to:
Medicine Today, PO Box 1473, Neutral Bay, NSW 2089,
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DEAR EDITOR: An item in the 'In Brief' section of the January 2011 issue of *Medicine Today* reports a study by Dr Coker and colleagues showing antibiotics to be of little use in acute otitis media, while a slightly more recent study by Dr Hoberman and colleagues has opposite conclusions.^{1,2} Can both be correct?

Dr Coker's study concentrates on amoxicillin, which clearly does not work. I think most grassroots GPs would agree with this. The report's conclusion, however, that newer antibiotics 'did not appear to work any better' is an illogical extrapolation.

The Hoberman study shows what most GPs already see; that amoxicillin-clavulanate (and indeed second-generation cephalosporins) make a huge, overnight difference in acute otitis media.

I am not an academic but have found that amoxicillin is always shown to be only marginally better than placebo, while combination amoxicillin-clavulanate is clearly superior. Despite this, I feel there is some kind of political pressure or fashion to focus only on amoxicillin, concluding that money may be saved by not prescribing antibiotics in most cases of acute otitis media. Studies on other antibiotics seem to be lacking or rarely spoken about.

I would be grateful for any comments from relevant members of *Medicine Today's* Board of Honorary Consultants on this debate.

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REFERENCES

1. Coker TR, Chan LS, Newberry SJ, et al. Diagnosis, microbial epidemiology, and antibiotic treatment of acute otitis media in children: a systematic review. *JAMA* 2010; 304: 2161-2169.
2. Hoberman A, Paradise JL, Rockette HE, et al. Treatment of acute otitis media in children under 2 years of age. *N Engl J Med* 2011; 364: 105-115.

EDITOR'S NOTE: *The study by Hoberman and colleagues was reported in the 'In Brief' section of the February 2011 issue of Medicine Today.*

REPLY: Acute otitis media (AOM) is the most common illness diagnosed in young children. In the pre-antibiotic era it had been associated with frequent and severe life-threatening complications (mastoiditis, meningitis and brain abscess). However, as a result of many factors – mostly improvements in the general health and nutrition of the community and in immunisation (increased uptakes of *Haemophilus influenzae* type b

[HIB] and polyvalent pneumococcal vaccines) but also the development of antibiotics for the treatment of severe and complicated cases – otitis media has become a milder condition that often resolves without treatment. In some cases, it is completely asymptomatic.

Evidence from a large number of randomised controlled trials has led to re-evaluation of the many interventions that have been used routinely for treating acute otitis media (e.g. myringotomy), and renewed guidelines for the prescription of antibiotics (mainly amoxicillin and amoxicillin-clavulanate) in most cases of acute otitis media. The microbiology of the condition has also changed since the introduction of HIB and polyvalent pneumococcal vaccines, with a decrease in the prevalence of pneumococcus cases and an increase in haemophilus cases. The question of which is the best first-line choice of antibiotic remains unresolved, with some studies showing little difference in efficacy between any of the antibiotics commonly prescribed for acute otitis media in Australia. The recommendation for at-risk Australian populations (Aboriginal children) is still amoxicillin (at a dose of 50 mg/kg/day).¹

Two recently published studies concerning the efficacy of antibiotic treatment in acute otitis media (Coker *et al* and Hoberman *et al*) highlight key points that are useful to GPs, paediatricians and other medical attendants who commonly encounter the condition in their practice.^{2,3} These studies were reviewed in the 'In Brief' sections of the January and February 2011 issues, respectively, of *Medicine Today*. The key points are listed below.

- The natural history of acute otitis media is spontaneous resolution of symptoms in most cases, often within a few days without any treatment (up to 60% in two days and 80% in three days).
- Otoloscopic findings of a bulging, reddened eardrum are critical to accurate diagnosis, as symptoms of otitis media in young children can be easily confused with those of other respiratory illnesses, such as viral upper respiratory tract infections.
- Immediate antibiotic therapy (amoxicillin or amoxicillin-clavulanate for 10 days) produces a modest improvement in the number of cases becoming symptom-free at three,

seven and 10 days. However, the treated child is at risk of antibiotic side effects.

- More specifically, Coker and colleagues found in a meta-analysis that 80% of children with acute otitis media will become symptom-free within three days without antibiotic treatment and a further 12% will improve in the short term with immediate antibiotic treatment, but that 3 to 10% of this treated group will develop rash and 5 to 10% will develop diarrhoea.¹ Hoberman and colleagues similarly found that there was a modest improvement of 5 to 10% in the resolution rate with amoxicillin–clavulanate therapy at any time in the first seven days compared with placebo-treated children.²

The outcomes of these two well-run trials and many other recent studies have prompted more thoughtful recommendations regarding antibiotic therapy for acute otitis media. These result from consideration of the modest benefits of treatment compared with simple supportive therapy (paracetamol and observation with review) needing to be weighed against the possibility of side effects, the development of antibiotic resistance and increased cost.

A strategy of watchful waiting for most cases of acute otitis media in the early days of the illness is the most sensible way forward, with antibiotic therapy held in reserve for cases in which symptoms persist or worsen in this period.⁴ This is now the official recommendation for management of acute otitis media in the Netherlands and Scotland and is also endorsed as an option by US and Canadian paediatric societies.

There is little debate that immediate treatment is indicated for severe symptoms, complications (e.g. perforation or symptoms of meningitis) or at-risk populations (Aboriginal children, those with chronic respiratory illness and immunocompromised children).¹

These recommendations are reflected in the current edition of the *Therapeutic Guidelines: Antibiotic, Version 14*, which was published in 2010.⁵

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REFERENCES

1. Morris P, Ballinger D, Leach A, et al. Recommendations for clinical care guidelines on the management of otitis media in Aboriginal and Torres Strait Islander populations. Canberra: Office for Aboriginal and Torres Strait Islander Health, Commonwealth Department of Health and Aged Care; 2001.
2. Coker TR, Chan LS, Newberry SJ, et al. Diagnosis, microbial epidemiology, and antibiotic treatment of acute otitis media in children: a systematic review. *JAMA* 2010; 304: 2161-2169.
3. Hoberman A, Paradise JL, Rockette HE, et al. Treatment of acute otitis media in children under 2 years of age. *N Engl J Med* 2011; 364: 105-115.
4. Morris PS, Leach AJ. Managing otitis media: an evidence-based approach. *Aust Prescr* 2009; 32: 155-159.
5. Antibiotic Expert Group. *Therapeutic guidelines: antibiotic. Version 14*. Melbourne: Therapeutic Guidelines Ltd; 2010.