

Attention prescribers: be careful with antibiotics

This is the title of a commentary in the Lancet this week. Stephanie Dancer reflects on a randomised trial from Belgium [1].

She writes: “Malhotra-Kumar and co-workers undertook a randomised, double-blind, placebo-controlled study designed to satisfy scientists and persuade even the most disengaged of clinical readers. The effect of two macrolide antibiotics, azithromycin (500 mg once daily for 3 days) and clarithromycin (500 mg twice daily for 7 days), was measured against placebo in four groups of volunteers by use of oral streptococci as model organisms[2]. The researchers recorded a clearly defined effect on commensal pharyngeal streptococci, with both drugs selecting for macrolide resistance.”

A previous paper from this group showed a clear correlation on a national level between antibiotic use and the prevalence of resistant organisms [3], but now there is evidence from a randomised trial on the individual level. We can say be more sure of something my patients have expressed for a long time, the worry that the individual who takes lots of antibiotics may be at personal risk of becoming colonised with resistant organisms.

The commentary ends: “We now have strengthened evidence for the links between antibiotic use and resistance. Our only response to the delay in proving this association should be to get on and do something about it before the antibiotic era finally grinds to its apocalyptic halt.”

In my experience there are two useful tactics in Primary Care to reduce antibiotic prescribing where it is not essential. The first is to ask directly whether the patient is expecting an antibiotic (as they may well not be)[4], and then suggesting that the antibiotics could at least be deferred in patients who are not toxic, as many upper respiratory infections will clear by themselves[5]. The [December 2006 Newsletter](#) also gives some further information to guide which children with acute otitis media benefit most from antibiotics.

[1] Dancer S. Attention prescribers: be careful with antibiotics. Lancet. 2007;369:442-3.

[2] Malhotra-Kumar S, Lammens C, Coenen S, Van Herk K, Goossens H. Effect of azithromycin and clarythromycin therapy on pharyngeal carriage of macrolide-resistant streptococci in healthy volunteers: a randomised, double-blind, placebo-controlled study. 369: 482-490. Lancet. 2007;369:482-90.

[3] Goossens H, Ferech M, Vander Stichele R, Elseviers M. Outpatient antibiotic use in Europe and association with resistance: a cross-national database study. Lancet. 2005 Feb 12;365(9459):579-87.

[4] Mangione-Smith R, McGlynn EA, Elliott MN, Krogstad P, Brook RH. The relationship between perceived parental expectations and pediatrician antimicrobial prescribing behavior. Pediatrics. 1999 Apr;103(4 Pt 1):711-8.

[5] Cates C. Reducing antibiotic use in children with acute otitis media. BMJ. 1999 July 10, 1999;319(7202):124.