



PIC QUESTION OF THE WEEK: 03/28/05

Q: Can azithromycin be used to treat pertussis?

A: Pertussis (whooping cough) is a highly contagious, acute respiratory tract infection caused by the gram-negative organism *Bordetella pertussis*. The disease usually begins with mild cold-like symptoms (rhinitis, conjunctivitis, and slight cough), but progresses to severe coughing spells associated with a "whooping" sound when the person inhales. Other possible signs include thick mucus, vomiting (due to excessive coughing), and cyanotic appearance. Macrolide antibiotics are the drugs of choice for the treatment of pertussis. Patients intolerant of macrolides should be treated with trimethoprim-sulfamethoxazole. Antibiotics are believed to reduce the duration and/or severity of symptoms, but only if started within the first few days of symptom onset. The Centers for Disease Control (CDC) recommends initial treatment with erythromycin; however, azithromycin is gaining popularity due to reduced gastrointestinal effects and a more convenient dosing schedule. In recent studies, the newer macrolides (azithromycin and clarithromycin) have been as effective as erythromycin for the treatment of pertussis. Azithromycin should be dosed at 10mg/kg (maximum 500mg) as a single dose on day 1, followed by 5mg/kg (maximum 250mg) daily for the next four days. An untreated, unimmunized infant may be contagious for six or more weeks. Antibiotics can shorten this infectious period to five days. Even though the disease is preventable through childhood vaccination, the incidence of pertussis among adolescents and adults has been increasing in the last several years. This is most likely due to incomplete world-wide immunization, decreased efficacy of the vaccine over time, and continued circulation of the bacteria between asymptomatic carriers and unvaccinated children.

References:

- Hewlett E, Edwards K. Pertussis – not just for kids. *N Engl J Med* 2005;352:1215-21.
- American Academy of Pediatrics. Pertussis. In: Pickering LK, ed. *Redbook:2003 Report of the Committee on Infectious Diseases*. 26th ed. Elk Grove Village, IL: American Academy of Pediatrics;2003:472-86.

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