

Chloramphenicol Therapy in Pregnancy

Str—The report by Choi and Pai [1] provides useful information for treating scrub typhus in pregnancy. However, they err in reporting the class of chloramphenicol for treatment in pregnancy. The current class is C, indicating no data for safety in pregnancy. There is a wealth of clinical data [2] demonstrating that chloramphenicol is safe to use in pregnancy if it is not circulating at the time of delivery, since the drug will cause gray syndrome in neonates. It does not seem to harm the fetus, however, which makes it safe to use during most of the pregnancy. Although a drug other than chloramphenicol would be used in most situations, physicians should not be afraid to use it when necessary simply because of pregnancy.

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References

Minocycline versus Doxycycline in the Treatment of Lyme Neuroborreliosis

Str—Dotevall and Hagberg [1] from Göteborg University (Göteborg, Sweden) deserve praise for their well-done study on oral doxycycline treatment of Lyme disease–associated facial palsy and meningitis. This study confirms that oral doxycycline is equivalent to parenteral ceftriaxone in the treatment of Lyme disease–associated palsy and/or meningitis. Experience indicates 21 days of oral doxycycline therapy is equivalent to 14 days of ceftriaxone therapy [3], and Swedish investigators have demonstrated that equivalent results are achieved with doxycycline therapy for ≈2 weeks (median, 10.8 days).

Dotevall and Hagberg correctly point out that there has been some reluctance to use oral antibiotics in the treatment of Lyme neuroborreliosis because of fear of inadequate CSF and/or CNS penetration [2, 3]. Doxycycline is preferred over conventional tetracycline for this purpose because of its lipid solubility characteristics [4–6], as stated by Dotevall and Hagberg.

Doxycycline is 5 times more lipid soluble than conventional tetracycline, which is an important determinant of permeability of the blood-brain barrier [7, 8]. Dotevall and Hagberg showed that most patients had highly elevated CSF protein levels, which is the best index of antibiotic permeability of the blood-brain barrier. Aside from emphasizing a shorter duration of therapy, these researchers stressed the use of high dosages of doxycycline (e.g., 400 mg/d) for treatment of Lyme neuroborreliosis.

It is not commonly appreciated that ill patients treated with doxycycline (e.g., patients with legionnaires’ disease) should be given a loading regimen of 200 mg iv q12h for the first 72 h, because of doxycycline’s lipid solubility characteristics and long half-life. Since 5 serum half-lives are usually required to achieve steady-state serum concentrations, and early therapeutic effect, a loading regimen rather than a loading dose permits rapid saturation of the serum. If doxycycline is administered in the usual dosage of 100 mg q12h, then it takes 4–5 days to achieve steady-state kinetics and an observable therapeutic response. In Lyme neuroborreliosis, rapid saturation of the CNS compartment is