



PIC QUESTION OF THE WEEK: 10/13/08

Q: What are the risks of using metronidazole during pregnancy?

A: Metronidazole (Flagyl) was first marketed in 1963 and labeled for the treatment of anaerobic infections, trichomoniasis, and bacterial vaginosis. In addition, the drug is now routinely used for the management of antibiotic-associated colitis, giardiasis, and eradication of *Helicobacter pylori*. It is considered the first line of treatment for many of these infections in non-pregnant patients. Since its introduction, there has long been controversy over the use of metronidazole during pregnancy. The basis of this concern was early evidence that the drug was mutagenic and possibly carcinogenic in mice and rats. Anomalies associated with its administration in humans included CNS effects, abnormalities of the feet and hands, oral clefts, hypospadias, and syndactyly. Unfortunately, individual case reports are not sufficient to establish a definite causal relationship between the use of metronidazole and congenital anomalies. For many years, it was suggested that metronidazole be avoided in all stages of pregnancy. A meta-analysis of several trials using metronidazole during pregnancy concluded there was no association with its use and congenital malformations. Today, the product literature still includes a contraindication to its use during the first trimester of pregnancy. This recommendation is supported by several groups including the American College of Obstetrics and Gynecology. The American Academy of Pediatrics even expresses some concern over its use during breastfeeding and provides guidelines to reduce infant exposure. No precautions are listed for administration of metronidazole during the second and third trimesters. In many cases, there are alternatives to metronidazole in the first trimester of pregnancy. Although the drug is generally considered to be contraindicated during this period, there appears to be little clinical data to support this recommendation.

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(Accessed October 9, 2008)

Kristen L. Ridge and John M. Van Damia, Pharm.D. Candidates

The PIC Question of the Week is a publication of the Pharmaceutical Information Center, Mylan School of Pharmacy, Duquesne University, Pittsburgh, PA 15282 (412.396.4600).