عنوان مقاله:

Clinical Pharmacology of Fluconazole in Neonates: Effects and Pharmacokinetics

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خلاصه مقاله:

Fluconazole is commonly used both to prevent and to treat invasive neonatal Candida albicans infection. This drug is a potent, selective, triazole inhibitor of the fungal enzymes involved in ergosterol synthesis. It is largely excreted unchanged in the urine. In infants with a birth weight <1,500 grams, fungal infection is approximately 3% to 4%. Up to 30% of infants with invasive candidiasis die. Penetration into the cerebral spinal is good. While high-dose systemic exposure of 400 mg/day in the first trimester of pregnancy can produce serious fetal abnormalities a single dose of 150 mg of fluconazole does not produce fetal abnormalities. The fluconazole exposure target AUC of ≥400 µg.h/ml should be reached and a dosage of 12 mg/kg/day is recommended. However, to reach the desired fluconazole concentration a loading dose of 25 mg/kg of fluconazole is used in patients with candidiasis on the first day of therapy. The half-life of fluconazole ranges from 25.5 to 88.6 hours while adults it is 32 hours. In prematures, the half-life of fluconazole is 88.6, 67.5 and 55.2 hours, in the first day, in the first week and in the second week of life, respectively. The clearance of fluconazole ranges from 0.27 to 0.52 ml/min/kg and the adults it is 0.27 ml/min/kg. The distribution volume of fluconazole ranges from 1.1 to 2.4 l/kg and in adults it is 0.60 l/kg. The aim of this study is to review the effects and pharmacokinetics of fluconazole in neonates.

کلمات کلیدی:

effects, Fluconazole, Neonates, Pharmacokinetics