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عنوان مقاله:

Clinical Pharmacology of Cefepime in Infants and Children

محل انتشار:

مجله بین المللی کودکان, دوره 5, شماره 4 (سال: 1396)

تعداد صفحات اصل مقاله: 18

نویسندگان:

.Gian Maria Pacifici - *via San Andrea ۳۲, ۵۶۱۲۷ Pisa, Italy*

.Giovanna Marchini - *Via San Andrea ۳۲, ۵۶۱۲۷ Pisa, Italy*

خلاصه مقاله:

Cefepime is a fourth-generation cephalosporin which is approved in Europe and in the USA. Food and Drug Administration (FDA) approves cefepime in the treatment of febrile neutropenia. Cefepime is active against gram-negative microorganisms such as Escherichia coli, Haemophilus influenzae, Enterobacter, Klebsiella, Morganella, Neisseria, Serratia, and Proteus species. Cefepime is also active against gram-positive microorganisms such as Streptococcus pneumoniae, Streptococcus agalactiae, and Staphylococcus aureus. Cefepime binds to plasma proteins ≤ 20%, and it is excreted unchanged in the urine. Cefepime distributes widely in body tissues and fluids such as cerebrospinal fluid, bile, bronchial secretions, ascites fluid, and middle ear. In neonates, the half-life of cefepime ranges from 3.59+0.61 and 5.09+1.80 hours, and in adults it is 2.1 (range, 1.3 to 2.4 hours).The rank order of the top 10 pediatric pathogens was analyzed and the comparative antimicrobial potency of broad-spectrum parenteral cephalosporins was exterminated. The rank order of the top 10 pediatric pathogens was Streptococcus pneumoniae (15.5%) > Haemophilus influenzae (14.6%) > Staphylococcus aureus (13.8%) > Moraxella catarrhalis = coagulase-negative staphylococci (8.0%) > Escherichia coli (7.8%) > Pseudomonas aeruginosa (5.2%) > Klebsiella spp. (4.8%) > Enterococcus spp. (4.7%) > beta-hemolytic streptococci (4.4%). Cefepime is the most active antibiotic among β-lactams. Cefepime is active against Enterobacter species (MIC90), 2 µg/ml; 99.3% susceptible, whereas the susceptibility rates of other broad-spectrum β-lactams (ceftriaxone, ceftazidime and piperacillin-tazobactam), were significantly lower (78.4 to 81.5). Cefepime remains a very potent alternative for the treatment of contemporary pediatric infections. The aim of the present study was to review the clinical pharmacology of cefepime in infants and .children

کلمات کلیدی:

Cefepime, Dosage, effects, Pharmacokinetics, Resistance

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