Cefoperazone

Antibiotic Class:
Third-Generation Cephalosporin

Antimicrobial Spectrum:
Staphylococcus aureus (methicillin susceptible), Coagulase negative Staphylococci,
Streptococcus pneumoniae (penicillin susceptible), Streptococcus spp., Haemophilus
influenzae, Moraxella catarrhalis, Neisseria meningitides, Neisseria gonorrhoeae,
Enterobacteriaceae, E. coli

Mechanism of Action:
Cephalosporins exert bactericidal activity by interfering with bacterial cell wall synthesis
and inhibiting cross-linking of the peptidoglycan. The cephalosporins are also thought to
play a role in the activation of bacterial cell autolysins which may contribute to bacterial
cell lysis.

Pharmacodynamics:
Cephalosporins exhibit time-dependent killing (T > MIC)

Pharmacokinetics:
Dose of 1g: Cmax: 153mcg/L; Half-life: 2.1 hours; Volume of distribution: 11L; Table 11

Adverse Effects:
Hypersensitivity: Maculopapular rash, Urticaria, Pruritis, Anaphylaxis/angioedema,
eosinophilia
Hematologic: Hypoprothrombinemia, Neutropenia, Leukopenia, Thrombocytopenia
GI: Diarrhea, C. difficile disease
Renal: Interstitial nephritis
Table 14

Dosage:
IV: 1g, 2g, 10g vials
Dosing in adults:
Skin and/or subcutaneous tissue infections: 2-4g/day divided IV q12h
Pelvic inflammatory disease: 2-4g/day divided IV/IM q12h
Respiratory tract infection: 2-4 g/day divided IV/IM q12h
Endometritis: 2-4 g/day divided IV/IM q12h
Dosing in pediatrics:
100-150mg/kg/day divided q8-12h
Table 12

Disease state based dosing:
Renal failure: No dosing changes recommended at this time.
Hepatic failure: No dosing changes recommended at this time.
Contraindications/Warnings/Precautions:
Precautions: hypersensitivity to penicillins, history of gastrointestinal disease, particularly
colitis, renal impairment, dosage reduction may be necessary in patients with liver
dysfunction, concomitant alcohol use (disulfiram-like reaction), patients with a poor
nutritional status, malabsorption states (eg, cystic fibrosis), alcoholism, and patients on
prolonged hyperalimentation regimens are at high risk for cefoperazone-induced vitamin K
deficiency

Drug Interactions:
Heparin: an increased risk of bleeding
Live Typhoid Vaccine: decreased immunological response to the typhoid vaccine
Warfarin: an increased risk of bleeding

Pregnancy:
Category B: No evidence of risk in humans but studies inadequate.

Monitoring Requirements:
Therapeutic: Culture and sensitivities, serum levels, signs and symptoms of infection,
white blood cell count
Toxic: Urinalysis, BUN, SCr, AST and ALT, skin rash, Neutropenia and leukopenia,
Prothrombin time in patients with renal or hepatic impairment or poor nutritional state, as
well as patients receiving a protracted course of antimicrobial therapy, and patients
previously stabilized on anticoagulant therapy.

Brand names/Manufacturer: Cephobid→/Pfizer, Sulperazone→/Pfizer