

Cefixime

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 meningitidis*, *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 400mg: Cmax: 3.6 mcg/L; Half-life: 3.1 hours; Tmax: 3.7hours; 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:

PO: 400mg tablets

Suspension: 100mg/5mL

Adult dosing: 400 mg PO once a day or divided twice a day

Gonorrhea: 400 mg PO as one-time dose

Disease state based dosing:

Renal failure: CrCl > 60 mL/min: standard dosing

CrCl 21-60 mL/min: 75% of usual dose q24h

CrCl < 20 mL/min: Half of usual dose q24h

Hepatic failure: No dosing changes recommended at this time.

Contraindications/Warnings/Precautions:

Precautions: hypersensitivity to penicillins, history of gastrointestinal disease, particularly colitis, renal impairment

Drug Interactions:

Live Typhoid Vaccine - decreased immunological response to the typhoid vaccine

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: Suprax®/Lederle