cefadroxil (sef-a-**drox**-ill)

~~Duricef~~

Classification

Therapeutic: anti-infectives
Pharmacologic: first-generation cephalosporins

Pregnancy Category B

Indications

Treatment of the following infections due to susceptible organisms: Skin and skin structure infections (including burn wounds), Pharyngitis and/or tonsilitis, Urinary tract infections. Not suitable for the treatment of meningitis.

Action

Bind to bacterial cell wall membrane, causing cell death. **Therapeutic Effects:** Bactericidal action against susceptible bacteria. **Spectrum:** Active against many gram-positive cocci including: *Streptococcus pneumoniae*, Group A beta-hemolytic streptococci, Penicillinase-producing staphylococci. Not active against: Methicillin-resistant staphylococci, *Bacteroides fragilis*, *Enterococcus*. Active against some gram-negative rods including: *Klebsiella pneumoniae*, *Proteus mirabilis*, *Moraxella catarrhalis*, *Escherichia coli*.

Pharmacokinetics

Absorption: Well absorbed after oral administration.
Distribution: Widely distributed. Crosses the placenta and enters breast milk in low concentrations. Minimal CSF penetration.
Metabolism and Excretion: Excreted almost entirely unchanged by the kidneys.
Half-life: 1–2 hr (↑ in renal impairment).

TIME/ACTION PROFILE (blood levels)

ROUTE	ONSET	PEAK	DURATION
PO	rapid	1.5–2 hr	12–24 hr

Contraindications/Precautions

Contraindicated in: Hypersensitivity to cephalosporins; Serious hypersensitivity to penicillins.

Use Cautiously in: Renal impairment (dose ↓ and/or ↑ dosing interval recommended if CCr ≤50 mL/min); History of GI disease, especially colitis; ***Geri:*** Dose adjustment due to age-related ↓ in renal function may be necessary; ***OB, Lactation:*** Half-life is shorter and blood levels lower during pregnancy; has been used safely.

Adverse Reactions/Side Effects

CNS: SEIZURES (very high doses). **GI:** PSEUDOMEMBRANOUS COLITIS, diarrhea, nausea, vomiting, dyspepsia. **Derm:** STEVENS-JOHNSON SYNDROME, rashes, pruritis, urticaria. **Hemat:** agranulocytosis, thrombocytopenia. **Misc:** allergic reactions including anaphylaxis and serum sickness, superinfection.

Interactions

Drug-Drug: Probenecid ↓ excretion and ↑ blood levels of renally excreted cephalosporins. Concurrent use of **loop diuretics** or **aminoglycosides** may ↑ the risk of renal toxicity.

Route/Dosage

PO (Adults): *Pharyngitis and/or tonisilitis*— 500 mg every 12 hr or 1 g every 24 hr for 10 days. *Skin and soft tissue infections*— 500 mg every 12 hr or 1 g every 24 hr. *Urinary tract infections*— 500 mg–1 g every 12 hr or 1–2 g every 24 hr.
PO (Children): *Pharyngitis, tonsilitis, or impetigo*— 15 mg/kg every 12 hr or 30 mg/kg every 24 hr for 10 days. *Skin and soft tissue infections*— 15 mg/kg every 12 hr. *Urinary tract infections*— 15 mg/kg every 12 hr.

Renal Impairment

PO (Adults): *CCr 25–50ml/min*— 500 mg every 12 hr; *CCr 10–25 mL/min*— 500 mg every 24 hr; *CCr 0–10 mL/min*— 500 mg every 36 hr.

NURSING IMPLICATIONS

Assessment

- Assess patient for infection (vital signs; appearance of wound, sputum, urine, and stool; WBC) at beginning of and throughout therapy.
- Before initiating therapy, obtain a history to determine previous use of and reactions to penicillins or cephalosporins. Persons with a negative history of penicillin sensitivity may still have an allergic response.
- Obtain specimens for culture and sensitivity before initiating therapy. First dose may be given before receiving results.
- **Observe patient for signs and symptoms of anaphylaxis (rash, pruritus, laryngeal edema, wheezing). Discontinue drug and notify physician or**

other health care professional immediately if these problems occur. Keep epinephrine, an antihistamine, and resuscitation equipment close by in case of an anaphylactic reaction.

- **Monitor bowel function. Diarrhea, abdominal cramping, fever, and bloody stools should be reported to health care professional promptly as a sign of pseudomembranous colitis. May begin up to several weeks following cessation of therapy.**
- **Assess patient for skin rash frequently during therapy. Discontinue at first sign of rash; may be life-threatening. Stevens-Johnson syndrome may develop. Treat symptomatically; may recur once treatment is stopped.**
- ***Lab Test Considerations:*** May cause positive results for Coombs' test in patients receiving high doses or in neonates whose mothers were given cephalosporins before delivery.
- May cause ↑ serum AST, ALT, alkaline phosphatase, bilirubin, LDH, BUN, and creatinine.
- May rarely cause agranulocytosis, thrombocytopenia, and eosinophilia.

Potential Nursing Diagnoses

Risk for infection (Indications) (Side Effects)
Diarrhea (Adverse Reactions)
Deficient knowledge, related to medication regimen (Patient/Family Teaching)

Implementation

- **Do not confuse Duricef with Ultracet.**
- **PO:** Administer around the clock. May be administered on full or empty stomach. Administration with food may minimize GI irritation. Shake oral suspension well before administering. Refrigerate oral suspensions.

Patient/Family Teaching

- Instruct patient to take medication around the clock at evenly spaced times and to finish the medication completely as directed, even if feeling better. Missed doses should be taken as soon as possible unless almost time for next dose; do not double doses. Instruct patient to use calibrated measuring device with liquid preparations. Advise patient that sharing this medication may be dangerous.
- Advise patient to report signs of superinfection (furry overgrowth on the tongue, vaginal itching or discharge, loose or foul-smelling stools) and allergy.
- **Instruct patient to notify health care professional if rash, or fever and diarrhea develop, especially if diarrhea contains blood, mucus, or pus. Advise patient not to treat diarrhea without consulting health care professional.**

Evaluation/Desired Outcomes

- Resolution of signs and symptoms of infection. Length of time for complete resolution depends on the organism and site of infection.

Why was this drug prescribed for your patient?