**Cefditoren (self-di-ten-ren)**

**Spectracef**

**Classification**

Therapeutic: anti-infection
Pharmacologic: third-generation cephalosporin

**Pregnancy Category** B

**Indications**

Treatment of the following infections caused by susceptible organisms: Acute exacerbations of chronic bronchitis, Community-acquired pneumonia, Pharyngitis and tonsillitis. Empyema and skin and skin structure infections.

**Action**

Binds to bacterial cell wall membrane, causing cell death. Therapeutic Effects: Bactericidal action against susceptible bacteria.

**Spectrum:**

Active against the following gram-positive organisms: *Staphylococcus aureus* (methicillin-susceptible strains, including 

| -lactamase-producing strains), *Streptococcus pneumoniae* (penicillin-susceptible strains only), *Streptococcus pyogenes*; Active against the following gram-negative organisms: *Haemophilus influenzae* (including 

| -lactamase-producing strains), *Haemophilus parainfluenzae* (including 

| -lactamase-producing strains), *Moraxella catarrhalis* (including 

| -lactamase-producing strains).

**Pharmacokinetics**

Absorption: Cefditoren pivoxil is a prodrug that is converted to cefditoren (the active component) in the GI tract during absorption. Bioavailability 14% in fasting state, increased by high fat meal.

Distribution: Widely distributed.

Protein Binding: 88%.

Metabolism and Excretion: Mostly excreted unchanged by the kidneys.

Half-life: 1.6 hr (increased in renal impairment).

**Time/Action Profile (blood levels)**

<table>
<thead>
<tr>
<th>Route</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>oral</td>
<td>rapid</td>
<td>rapid</td>
<td>1.5–3 hr</td>
</tr>
<tr>
<td>oral</td>
<td>12 hr</td>
<td></td>
<td></td>
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</tbody>
</table>

**Contraindications/Precautions**

Contraindicated in: Hypersensitivity to cephalosporins; Serious hypersensitivity to penicillins; Carnitine deficiency (produces renal excretion of carnitine); M.H. protein hypothesis (contains sodium caseinate).

Use Cautionally in: Renal impairment (dose adjustment recommended if GFR < 30 mL/min) or lactation or children <12 yr (safety not established).

**Adverse Reactions/Side Effects**

CNS: SEIZURES (high doses), headache.

GI: PSEUDOMEMBRANOUS COLITIS, diarrhea, abdominal pain, nausea, vomiting.

GU: hematuria, vaginal moniliasis.

Hemat: bleeding, eosinophilia, hemolytic anemia, lymphocytosis, neutropenia, thrombocytosis.

Misc: allergic reactions including ANAPHYLAXIS, superinfection.

**Interactions**

Drug-Drug: Antacids and histamine H2 receptor antagonists decrease absorption (avoid concurrent use).

Probenecid decreases excretion and increases blood levels.

**Route/Dosage**

PO (Adults and Children >12 yr): Acute bacterial exacerbation of chronic bronchitis, Community-acquired pneumonia — 400 mg twice daily; Pharyngitis/tonsillitis, uncomplicated skin/skin structure infections — 200 mg twice daily.

Renal Impairment

PO (Adults and Children >12 yr): GFR 30–49 mL/min — dose should not exceed 200 mg twice daily; GFR <30 mL/min — dose should not exceed 200 mg once daily.

**NURSING IMPLICATIONS**

**Assessment**

- Assess for infection (vital signs; appearance of wound, sputum, urine, and stool; WBC) at beginning 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 (flush, pruritus, laryngeal edema, wheezing). Discontinue the drug and notify the physician or other health care professional immediately if these occur. Keep epinephrine, an antihistamine, and resuscitation equipment close by in the event 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.

● Lab Test Considerations: May cause positive results for Coombs’ test.

● Monitor prothrombin time and assess patient for bleeding (guaiac stools; check for hematuria, bleeding guaiac stools, ecchymoses) daily in high risk patients; may cause hypoprothrombinemia.

● May cause neutrocytic, eosinophilia, lymphocytosis, and thrombocytosis.

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

Implementation
● Cefditoren is not recommended for prolonged use since other pivalate-containing compounds have caused clinical manifestations of carnitine deficiency when used over a period of months.

● PO: Administer with meals to enhance absorption.

Patient/Family Teaching
● Instruct patient to take medication around the clock at evenly spaced times and to finish the medication completely, even if feeling better. Take missed doses as soon as possible unless it is almost time for next dose; do not double doses. Advise patient that sharing of 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 fever and diarrhea develop, especially if stool contains blood, pus, or mucus. Advise patient not to treat diarrhea without consulting health care professional.

● Inform female patients that cefditoren can be taken concurrently with oral contraceptives.

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?