Cefpodoxime is an orally administered 8-lactam antibiotic of the cephalosporin class. It is a prodrug, which is converted to the active metabolite, cefpodoxime, in the body. Cefpodoxime is a broad-spectrum antibiotic that can be used in the treatment of various bacterial infections, particularly those caused by bacteria resistant to other antibiotics.

**Pharmacokinetics**

Cefpodoxime is well absorbed after oral administration and has a half-life of 4.2 hours in plasma. The drug is distributed to body tissues and fluids, including the lungs, saliva, and breast milk. It is eliminated primarily via the kidneys, with approximately 70% of the dose recovered in the urine. Cefpodoxime is not significantly metabolized in the body.

**Indications**

Cefpodoxime is indicated for the treatment of infections caused by susceptible bacteria, including:

- Acute bacterial exacerbation of chronic bronchitis
- Acute bacterial sinusitis
- Acute bacterial exacerbation of chronic rhinosinusitis
- Acute otitis media
- Acute sinusitis
- Acute bacterial exacerbation of chronic bronchitis
- Upper respiratory tract infections
- Lower respiratory tract infections

**Contraindications**

Cefpodoxime is contraindicated in patients with a known allergy to cephalosporin antibiotics, penicillin, or both.

**Warnings**

- Cephalosporins may cause allergic reactions, including anaphylaxis and urticaria. Patients with a history of penicillin allergy may also be at risk for cephalosporin reactions.
- Cefpodoxime is associated with the risk of pseudomembranous colitis, particularly in patients with a history of colitis.

**Precautions**

- Cefpodoxime should be used with caution in patients with a history of gastrointestinal tract intolerance or a history of colitis.

**Adverse Effects**

Cefpodoxime may cause side effects such as diarrhea, constipation, flatus with mucus, abdominal cramps, and fever. These side effects may be more common in patients with a history of gastrointestinal tract intolerance or colitis.

**Dosage and Administration**

Cefpodoxime is available as tablets and extended-release capsules. The usual adult dose is 100 mg given as a single dose, or 200 mg once daily for up to 5 days. The total daily dose should be reduced in patients with renal impairment.

**Drug Interactions**

Cefpodoxime may interact with other drugs, particularly those that affect the metabolism of other drugs. These include:

- Antacids
- Antihypertensive medications
- Digoxin
- Rifampin
- Theophylline

**Pregnancy and Nursing**

Cefpodoxime is excreted in human milk. Studies in rats have shown that cefpodoxime is excreted in the milk of lactating mothers. Therefore, the drug should be used with caution during breastfeeding.

**Geriatric Use**

Cefpodoxime is generally well tolerated in elderly patients. However, age-related renal impairment may require a reduction in dosage.

**Dosage Adjustment**

- Cefpodoxime is not usually recommended for use in children under 18 years of age, especially those below 6 months.
- Cefpodoxime is not recommended for use in patients with severe renal impairment.

**Overdosage**

Overdosage with cefpodoxime is unlikely to cause significant toxicity. However, symptoms such as nausea, vomiting, diarrhea, and abdominal cramps may occur. There is no specific antidote for cefpodoxime poisoning.

**References**


Adverse Reactions and Abnormal Laboratory Tests:

- Blood: basophilia, monocytosis, thrombocytosis, decreased hemoglobin, decreased hematocrit, leukopenia, neutropenia, lymphocytopenia, thrombocytopenia, thrombocythemia.

- Cardiac: angina, chest pain, back pain, chest pain, palpitations, arrhythmia.

- Central and Peripheral Nervous System: dizziness, headache, syncope.

- Dermatologic: rash.

- Gastrointestinal: constipation, diarrhea, flatulence, nausea, vomiting, epigastric distress, and diarrhea.

- Hematologic: anemia, thrombocytopenia.

- Hepatic: jaundice, hepatic dysfunction including cholestasis, pancytopenia.

- Hemostatic: intravascular coagulation.

- Metabolic: hyperglycemia, hypoglycemia, hypoalbuminemia, hypoprothrombinemia.

- Musculoskeletal: back pain, muscle cramps, myalgia.

- Respiratory: anaphylactic shock, acute liver injury, in utero exposure with miscarriage, anaphylaxis, anaphylactoid reactions, angioedema, angioneurotic edema, anaphylactic reaction, allergic reaction, facial edema, allergic reaction, skin rash, angioedema, angioneurotic edema, anaphylactic reaction, allergic reaction, skin rash, angioedema, angioneurotic edema, angioedema.

- Special Senses: taste alterations, eye irritation, taste loss, tinnitus.

- Urinary: hematuria, urinary tract infections, metrorrhagia, dysuria, urinary incontinence.

Summary of Post-Marketing Experience:

- A total of 51 randomized, comparative trials performed in adults in the United States, cefpodoxime proxetil was comparably effective to other beta-lactam antibiotics. In these studies, the following bacterial eradication rates were obtained at 5 to 9 days after therapy:

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>Cefpodoxime Proxetil</th>
<th>Cefixime</th>
<th>Other beta-lactam antibiotics</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. coli</td>
<td>99/123 (80%)</td>
<td>13/23 (57%)</td>
<td>23/41 (56%)</td>
</tr>
<tr>
<td>S. pneumonia</td>
<td>72/124 (58%)</td>
<td>23/41 (56%)</td>
<td>72/124 (58%)</td>
</tr>
<tr>
<td>M. catarrhalis</td>
<td>200/258 (64%)</td>
<td>13/23 (57%)</td>
<td>200/258 (64%)</td>
</tr>
<tr>
<td>K. pneumonia</td>
<td>165/258 (64%)</td>
<td>13/23 (57%)</td>
<td>165/258 (64%)</td>
</tr>
</tbody>
</table>

- A total of 4696 cefpodoxime-treated patients were evaluated for bacterial eradication in multiple-dose clinical trials (N=1668 for cefpodoxime proxetil). The recommended dosages, durations of treatment, and applicable patient populations are as described in the following chart.

(Continued)