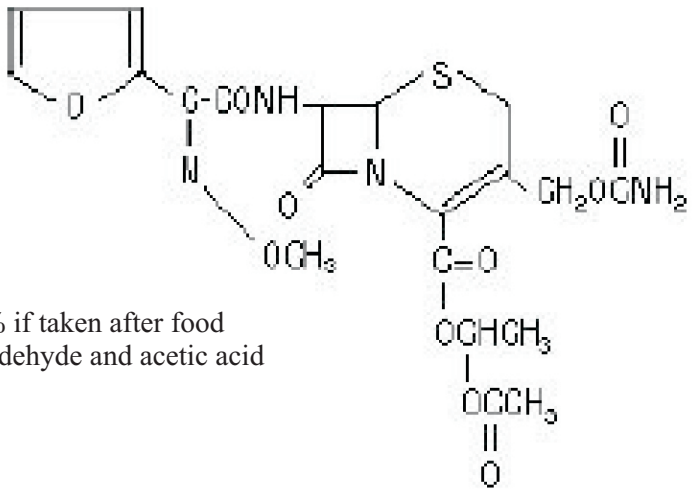
Taj Pharmaceuticals Ltd.

Cefuroxime Axetil

CAS No. : 55268-75-2

Chemical Name:

Formula C16H16N4O8S
Mol. mass 424.386 g/mol
ATC code J01DC02
PubChem 41375
DrugBank APRD00285
ChemSpider 4514699



Pharmacokinetic data

Bioavailability 37% on empty stomach, up to 52% if taken after food
Metabolism axetil moiety is metabolized to acetaldehyde and acetic acid
Half life 80 minutes
Excretion Urine 66-100% Unchanged

Systematic (IUPAC) name
4-(carbamoyloxymethyl)-8- [2-(2-furyl)-2-methoxyimino-acetyl]amino -7-oxo-

2-thia-6-azabicyclo[4.2.0]oct -4-ene-5-carboxylic acid

Chemically, cefuroxime axetil, the 1-(acetyloxy) ethyl ester of cefuroxime, is (RS)-1-hydroxyethyl (6R,7R)-7-[2-(2-furyl)glyoxyl-amido]-3-(hydroxymethyl)-8-oxo-5-thia-1-azabicyclo[4.2.0]-oct-2-ene-2-carboxylate, 72-(Z)-(O-methyl-oxime), 1-acetate 3-carbamate. Its molecular formula is C20H22N4O10S, and it has a molecular weight of 510.48.

DOSAGE

Cefuroxime axetil: Oral: Adults: 125 mg b.i.d. Max 500 mg. Children 3-2 years: 125 mg t.i.d. or 10 mg/kg body weight. Max: 250 mg. Children over 2 years: 250 mg b.i.d. of 15 mg/kg of bodyweight. Max: 500 mg. Lyme disease: 500 mg b.i.d.

Cefuroxime sodium: I.V. Adults: 750 mg every 8 hours Max: 1.5 g. Infants and children: 30-6- mg/kg bodyweight, increased to 100 mg/kg body weight daily of necessary (given in 3-4 divided doses).

In adults if the creatinine clearance is 10-20 ml/min or > 10 ml/min then the dose is b.i.d. or o.d. respectively.

Note: Dose above 1g by I.M. injection should be divided between sites.
Take this medication by mouth usually twice daily, or as directed by your doctor. Take cefuroxime with food to increase absorption and reduce stomach upset. Dosage is based on your medical condition and response to therapy.

Swallow the tablets whole. Do not crush or chew because the tablets have a strong bitter taste. Use the liquid suspension form of this medication if it is difficult to swallow the tablets.

Antibiotics work best when the amount of medicine in your body is kept at a constant level. Therefore, take this drug at evenly spaced intervals.

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Continue to take this medication until the full-prescribed amount is finished, even if symptoms disappear after a few days. Stopping the medication too early may allow bacteria to continue to grow, which may result in a relapse of the infection.
Inform your doctor if your condition persists or worsens.

SIDE EFFECTS

Side effects cannot be anticipated. If any develop or change in intensity, inform your doctor as soon as possible. Only your doctor can determine if it is safe for you to continueSide effects may include:
Diaper rash in infants, diarrhea, nausea, vomitinghas also been reported to occasionally cause allergic reactions, blood disorders, colitis, kidney and liver problems, jaundice (yellowing of the skin and eyes), peeling skin, seizures, severe blisters in the mouth and eyes, and impaired blood clotting.

Nausea, vomiting, diarrhea, or stomach pain may occur. Dizziness and drowsiness may occur less frequently, especially with higher doses. If any of these effects persist or worsen, notify your doctor or pharmacist promptly.

Remember that your doctor has prescribed this medication because he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

Tell your doctor immediately if any of these unlikely but serious side effects occur: mental/mood changes, unusual tiredness/weakness.

Tell your doctor immediately if any of these rare but very serious side effects occur: yellowing of the eyes/skin, severe stomach/abdominal pain, persistent nausea/vomiting, dark urine, change in the amount of urine, signs of new infection (e.g., fever, persistent sore throat), easy bruising/bleeding, jerky movements, chest pain.

This medication may rarely cause a severe intestinal condition (pseudomembranous colitis) due to a resistant bacteria. This condition may occur while receiving therapy or even weeks to months after treatment has stopped. Do not use anti-diarrhea products or narcotic pain medications if you have the following symptoms because these products may make them worse. Tell your doctor immediately if you develop: persistent diarrhea, abdominal or stomach pain/cramping, blood/mucus in your stool.

Use of this medication for prolonged or repeated periods may result in oral thrush or a new vaginal yeast infection (oral or vaginal fungal infection). Contact your doctor if you notice white patches in your mouth, a change in vaginal discharge or other new symptoms.

A very serious allergic reaction to this drug is unlikely, but seek immediate medical attention if it occurs. Symptoms of a serious allergic reaction may include: rash, itching, swelling, severe dizziness, trouble breathing.
This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

PRECAUTIONS

Before taking cefuroxime, tell your doctor or pharmacist if you are allergic to it; or to penicillins or other cephalosporin antibiotics or if you have any other allergies.
Before using this medication, tell your doctor or pharmacist your medical history, especially of: kidney disease, intestinal disease (colitis), liver disease, poor nutrition.

This drug may make you dizzy or drowsy; use caution engaging in activities requiring alertness such as driving or using machinery. Limit alcoholic beverages.

Caution is advised when using this drug in the elderly because they may be more sensitive to its effects.

This medication should be used only when clearly needed during pregnancy. Discuss the risk and benefits with your doctor.

This medication passes into breast milk. Consult your doctor before breast-feeding.

DRUG DESCRIPTION

Cefuroxime is an antibiotic resistant to most betalactamases and is active against a wide range of Gram-positive and Gram -negative organisms. The most important use of the drug is in treating meningitis caused by H. influenzae, meningcocci an pneumococcoi. This is so, because it attains high concentrations in C.S.F.

Cefuroxime is a semi-synthetic analog of cephalosphorin. It is a second-generation antibiotic. Cefuroxime is for parenteral use while cefuroxime axetil is of oral administration. Cefuroxime axetil is hydrolyzed to free cefuroxime, whose in vitro antimicrobial activity is similar to that of cefuroxime. Cefuroxime axetil has a broader spectrum of activity than cephalexin (first-generation). Cefuroxime is active against beta lactamase producing strains of H.influenzae and N.gonorrhoeae, which are normally resistant to ampicillin and penicillin, respectively.Cefuroxime is active against a wide range of Gram-positive and Gram-negative bacteria, including Staph. aureus, Strep. pyogenes, Strep. pneumonia, Neisseria spp. In vitro studies have shown cefuroxime to be better active against Gram-positive and Gram-negative organisms than earlier cephalosphorins such as cephradine and cephaloridine. The overall activity of cefuroxime is comparable to cefamandole, another semi-synthetic cephalosphorin. Cefuroxime interferes with the cell wall synthesis in the bacteria. Therapeutic levels are achieved in CSF only in inflamed conditions.

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