

Uses and Administration

Cefsulodin is a third-generation cephalosporin antibiotic with a narrow spectrum of activity that has been used similarly to ceftazidime (p.235) for the treatment of infections caused by susceptible strains of *Pseudomonas aeruginosa*.

It is given as the sodium salt by intravenous injection. Doses are expressed in terms of the equivalent amount of cefsulodin; 1.04 g of cefsulodin sodium is equivalent to about 1 g of cefsulodin. The usual adult dose is 6 g daily in 4 divided doses; in less severe infections daily doses of 3 to 4 g may be given. Children may be given a usual dose of 100 mg/kg daily; 50 mg/kg daily may be given in less severe infections.

References.

- Smith BR. Cefsulodin and ceftazidime, two antipseudomonal cephalosporins. *Clin Pharm* 1984; **3**: 373–85.
- Wright DB. Cefsulodin. *Drug Intell Clin Pharm* 1986; **20**: 845–9.

Administration in renal impairment. The dosage of cefsulodin given intravenously should be adjusted in patients with renal impairment according to creatinine clearance (CC):

- CC 20 to 50 mL/minute: a loading dose of 1.5 g then 1 g every 8 hours
- CC 5 to 20 mL/minute: a loading dose of 1.5 g then 1 g every 12 hours
- CC less than 5 mL/minute: a loading dose of 1.5 g then 1 g every 24 hours

In patients undergoing haemodialysis, 1 g is given before and after dialysis.

Preparations

Proprietary Preparations (details are given in Part 3)

Fr.: Pyocelaf; Jpn.: Takesulin.

Ceftazidime (BAN, USAN, rINN)

Ceftazidim; Ceftazidim pentahydrát; Ceftazidima; Ceftazidimas; Ceftazidimum; Ceftazidimum Pentahydricum; Ceftazidydm; GR-20263; Kefatsidimi; LY-139381; Sefazidim. (Z)-(7R)-7-[2-(2-Amino-1,3,4-thiazol-4-yl)-2-(1-carboxy-1-methylethoxymino)acetamido]-3-(1-pyridinylmethyl)-3-cephem-4-carboxylate pentahydrate.

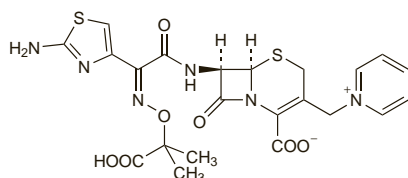
ЦЕФТАЗИДИМ

$C_{22}H_{22}N_6O_7S_2 \cdot 5H_2O = 636.7$.

CAS — 72558-82-8 (anhydrous ceftazidime); 78439-06-2 (ceftazidime pentahydrate).

ATC — J01DD02.

ATC Vet — QJ01DD02.



Pharmacopoeias. In *Chin.*, *Eur.* (see p.vii), *Jpn.*, and *US*.

Ph. Eur. 6.2 (Ceftazidime). A white or almost white crystalline powder. Slightly soluble in water and in methyl alcohol; practically insoluble in alcohol and in acetone; it dissolves in acid and alkali solutions. A 0.5% solution in water has a pH of 3.0 to 4.0. Store in airtight containers.

USP 31 (Ceftazidime). A white to cream-coloured crystalline powder. Slightly soluble in water, in dimethylformamide, and in methyl alcohol; insoluble in alcohol, in acetone, in chloroform, in dioxan, in ether, in ethyl acetate, and in toluene; soluble in alkali and in dimethyl sulfoxide. pH of a 0.5% solution in water is between 3.0 and 4.0. Store in airtight containers.

Formulation. Ceftazidime for injection is available as a dry powder containing ceftazidime with sodium carbonate. When reconstituted ceftazidime sodium is formed with the evolution of carbon dioxide. An alternative formulation, ceftazidime with arginine, appears to overcome the problems associated with effervescence.¹ In some countries a frozen injection containing ceftazidime sodium is also used.

- Stiles ML, *et al.* Gas production of three brands of ceftazidime. *Am J Hosp Pharm* 1991; **48**: 1727–9.

Incompatibility. It has been reported that ceftazidime does not cause decreased activity when incubated in solution with gentamicin¹ or tobramycin² at 37°, or when mixed with tobramycin in serum.³ Ceftazidime and tobramycin⁴ were also stable for up to 16 hours at room temperature when combined in a glucose-containing dialysis solution, and for a further 8 hours at 37°. However, licensed product information recommends that ceftazidime, like most other beta lactams, should not be mixed with an aminoglycoside in the same giving set or syringe because of the potential for inactivation of either drug.

Ceftazidime is generally considered to be compatible with metronidazole, but degradation of ceftazidime has been reported.⁵ Precipitation has occurred with vancomycin⁶ and therefore the product information considers it prudent to flush giving sets and intravenous lines between giving the two drugs. However, in one study⁷ ceftazidime and/or vancomycin were stable in a glucose-containing peritoneal dialysis solution when kept for 6 days in a refrigerator or 48 to 72 hours at room temperature, and in a further study⁸ the two drugs were stable when combined in similar solutions containing 1.5% or 4.25% glucose for up to 12 hours when stored at 37° and for 24 hours when stored at 4° and 24°. Ceftazidime and teicoplanin⁹ were stable in combination in a peritoneal dialysis solution at 37° for 8 hours when it had been previously stored at 4°, but not when previously stored at 25°. Ceftazidime was not stable when mixed in solution with aminophylline.¹⁰ There was some evidence of possible incompatibility with pentamidine.¹¹

- Elliott TSJ, *et al.* Stability of gentamicin in combination with selected new β -lactam antibiotics. *J Antimicrob Chemother* 1984; **14**: 668–9.
- Elliott TSJ, *et al.* Stability of tobramycin in combination with selected new β -lactam antibiotics. *J Antimicrob Chemother* 1986; **17**: 680–1.
- Pennell AT, *et al.* Effect of ceftazidime, cefotaxime, and cefoperazone on serum tobramycin concentrations. *Am J Hosp Pharm* 1991; **48**: 520–2.
- Mason NA, *et al.* Stability of ceftazidime and tobramycin sulfate in peritoneal dialysis solution. *Am J Hosp Pharm* 1992; **49**: 1139–42.
- Messerschmidt W. Pharmazeutische Kompatibilität von ceftazidim und metronidazol. *Pharm Ztg* 1990; **135**: 36–8.
- Cairns CJ, Robertson J. Incompatibility of ceftazidime and vancomycin. *Pharm J* 1987; **238**: 577.
- Vaughan LM, Poon CY. Stability of ceftazidime and vancomycin alone and in combination in heparinized and nonheparinized peritoneal dialysis solution. *Ann Pharmacother* 1994; **28**: 572–6.
- Stamatidis MK, *et al.* Stability of high-dose vancomycin and ceftazidime in peritoneal dialysis solutions. *Am J Health-Syst Pharm* 1999; **56**: 246–8.
- Manduru M, *et al.* Stability of ceftazidime sodium and teicoplanin sodium in a peritoneal dialysis solution. *Am J Health-Syst Pharm* 1996; **53**: 2731–4.
- Pleasant RA, *et al.* Compatibility of ceftazidime and aminophylline admixtures for different methods of intravenous infusion. *Ann Pharmacother* 1992; **26**: 1221–6.
- Lewis JD, El-Gendy A. Cephalosporin-pentamidine isethionate incompatibilities. *Am J Health-Syst Pharm* 1996; **53**: 1462–3.

Stability. References.

- Richardson BL, *et al.* The pharmacy of ceftazidime. *J Antimicrob Chemother* 1981; **8** (suppl B): 233–6.
- Brown AF, *et al.* Freeze thaw stability of ceftazidime. *Br J Parenter Ther* 1985; **6**: 43, 45, 50.
- Walker SE, Drantisaris G. Ceftazidime stability in normal saline and dextrose in water. *Can J Hosp Pharm* 1988; **41**: 65–6, 69–71.
- Wade CS, *et al.* Stability of ceftazidime and amino acids in parenteral nutrient solutions. *Am J Hosp Pharm* 1991; **48**: 1515–19.
- Stiles ML, *et al.* Stability of ceftazidime (with arginine) and of cefuroxime sodium in infusion-pump reservoirs. *Am J Hosp Pharm* 1992; **49**: 2761–4.
- Stewart JT, *et al.* Stability of ceftazidime in plastic syringes and glass vials under various storage conditions. *Am J Hosp Pharm* 1992; **49**: 2765–8.
- Nahata MC, *et al.* Stability of ceftazidime (with arginine) stored in plastic syringes at three temperatures. *Am J Hosp Pharm* 1992; **49**: 2954–6.
- Bednar DA, *et al.* Stability of ceftazidime (with arginine) in an elastomeric infusion device. *Am J Health-Syst Pharm* 1995; **52**: 1912–14.
- van Doorne H, *et al.* Ceftazidime degradation rates for predicting stability in a portable infusion-pump reservoir. *Am J Health-Syst Pharm* 1996; **53**: 1302–5.
- Stendal TL, *et al.* Drug stability and pyridine generation in ceftazidime injection stored in an elastomeric infusion device. *Am J Health-Syst Pharm* 1998; **55**: 683–5.
- Servais H, Tulkens PM. Stability and compatibility of ceftazidime administered by continuous infusion to intensive care patients. *Antimicrob Agents Chemother* 2001; **45**: 2643–7.

Adverse Effects and Precautions

As for Cefalotin Sodium, p.219.

Like cefotaxime (p.228), ceftazidime has the potential for colonisation and superinfection with resistant organisms. The risk of superinfection with, for example, *Staphylococcus aureus* may be higher than with cefotaxime, since ceftazidime is less active against staphylococci.

Breast feeding. No adverse effects have been seen in breast-fed infants whose mothers were receiving ceftazidime, and the American Academy of Pediatrics considers¹ that it is therefore usually compatible with breast feeding.

- American Academy of Pediatrics. The transfer of drugs and other chemicals into human milk. *Pediatrics* 2001; **108**: 776–89. Correction. *ibid.*; 1029. Also available at: <http://aappolicy.aappublications.org/cgi/content/full/pediatrics%3b108/3/776> (accessed 25/05/04)

Effects on the blood. References.

- Hui CH, Chan LC. Agranulocytosis associated with cephalosporin. *BMJ* 1993; **307**: 484.

Effects on the nervous system. References.

- Al-Zahawi MF, *et al.* Hallucinations in association with ceftazidime. *BMJ* 1988; **297**: 858.

- Jackson GD, Berkovic SF. Ceftazidime encephalopathy: absence status and toxic hallucinations. *J Neurol Neurosurg Psychiatry* 1992; **55**: 333–4.
- Chow KM, *et al.* Retrospective review of neurotoxicity induced by cefepime and ceftazidime. *Pharmacotherapy* 2003; **23**: 369–73.

Effects on the skin. References.

- Vinks SATMM, *et al.* Photosensitivity due to ambulatory intravenous ceftazidime in cystic fibrosis patient. *Lancet* 1993; **341**: 1221–2.

Interactions

Unlike many other cephalosporins, probenecid has little effect on the renal clearance of ceftazidime.

References.

- Verhagen CA, *et al.* The renal clearance of cefuroxime and ceftazidime and the effect of probenecid on their tubular excretion. *Br J Clin Pharmacol* 1994; **37**: 193–7.

Antimicrobial Action

Ceftazidime has a bactericidal action and broad spectrum of activity similar to that of cefotaxime (p.228), but increased activity against *Pseudomonas* spp.; it is less active against staphylococci and streptococci. Unlike cefotaxime it has no active metabolite.

Ceftazidime is highly stable to hydrolysis by most beta-lactamases. It is active *in vitro* against many Gram-negative bacteria including *Pseudomonas aeruginosa*, *Burkholderia pseudomallei* (*Pseudomonas pseudomallei*), and Enterobacteriaceae including *Citrobacter* and *Enterobacter* spp., *Escherichia coli*, *Klebsiella* spp., both indole-positive and indole-negative *Proteus*, *Providencia*, *Salmonella*, *Serratia*, and *Shigella* spp. and *Yersinia enterocolitica*. Other susceptible Gram-negative bacteria include *Haemophilus influenzae*, *Moraxella catarrhalis* (*Branhamella catarrhalis*), and *Neisseria* spp. Among Gram-positive bacteria it is active against some staphylococci and streptococci, but methicillin-resistant staphylococci, enterococci, and *Listeria monocytogenes* are generally resistant. Ceftazidime is active against some anaerobes, although most strains of *Bacteroides fragilis* and *Clostridium difficile* are resistant.

The activity of ceftazidime against *Ps. aeruginosa* and some Enterobacteriaceae may be enhanced by aminoglycosides. Antagonism has been reported *in vitro* between ceftazidime and chloramphenicol.

Resistance. As with cefotaxime, resistance may develop during treatment due to the derepression of chromosomally mediated beta-lactamases. It has been noted particularly in *Pseudomonas* spp. and in Enterobacteriaceae including *Citrobacter*, *Enterobacter* spp. and *Proteus vulgaris*. Resistance may also occur due to the production of plasmid-mediated extended-spectrum beta-lactamases, particularly in *Klebsiella* spp. and *E. coli*.

Pharmacokinetics

Ceftazidime is given by injection as the sodium salt or in solution with arginine. Mean peak plasma concentrations of 17 and 39 micrograms/mL have been reported about 1 hour after intramuscular doses of 0.5 and 1 g of ceftazidime, respectively. Five minutes after intravenous bolus injections of 0.5, 1, and 2 g of ceftazidime, mean plasma concentrations of 45, 90, and 170 micrograms/mL, respectively, have been reported. The plasma half-life of ceftazidime is about 2 hours, but this is prolonged in patients with renal impairment and in neonates. Clearance may be enhanced in patients with cystic fibrosis. It is about 10% bound to plasma proteins.

Ceftazidime is widely distributed in body tissues and fluids; therapeutic concentrations are achieved in the CSF when the meninges are inflamed. It crosses the placenta and is distributed into breast milk.

Ceftazidime is passively excreted in bile, although only a small proportion is eliminated by this route. It is mainly excreted by the kidneys, almost exclusively by glomerular filtration; probenecid has little effect on the excretion. About 80 to 90% of a dose appears un-

changed in the urine within 24 hours. It is removed by haemodialysis and peritoneal dialysis.

Cystic fibrosis. References.

1. Leeder JS, *et al.* Ceftazidime disposition in acute and stable cystic fibrosis. *Clin Pharmacol Ther* 1984; **36**: 355–62.
2. Hedman A, *et al.* Influence of the glomerular filtration rate on renal clearance of ceftazidime in cystic fibrosis. *Clin Pharmacokinet* 1988; **15**: 57–65.
3. Vinks AATMM, *et al.* Continuous infusion of ceftazidime in cystic fibrosis patients during home treatment: clinical outcome, microbiology and pharmacokinetics. *J Antimicrob Chemother* 1997; **40**: 125–33.

The elderly. References.

1. LeBel M, *et al.* Pharmacokinetics of ceftazidime in elderly volunteers. *Antimicrob Agents Chemother* 1985; **28**: 713–15.
2. Higbee MD, *et al.* Pharmacokinetics of ceftazidime in elderly patients. *Clin Pharm* 1989; **8**: 59–62.
3. Sirgo MA, Norris S. Ceftazidime in the elderly: appropriateness of twice-daily dosing. *DICP Ann Pharmacother* 1991; **25**: 284–8.

Hepatic impairment. References.

1. El Touny M, *et al.* Pharmacokinetics of ceftazidime in patients with liver cirrhosis and ascites. *J Antimicrob Chemother* 1991; **28**: 95–100.

Neonates. References.

1. van den Anker JN, *et al.* Ceftazidime pharmacokinetics in preterm infants: effects of renal function and gestational age. *Clin Pharmacol Ther* 1995; **58**: 650–9.
2. van den Anker JN, *et al.* Ceftazidime pharmacokinetics in preterm infants: effect of postnatal age and postnatal exposure to indomethacin. *Br J Clin Pharmacol* 1995; **40**: 439–43.
3. van den Anker JN, *et al.* Once-daily versus twice-daily administration of ceftazidime in the preterm infant. *Antimicrob Agents Chemother* 1995; **39**: 2048–50.

Renal impairment. References.

1. Welage LS, *et al.* Pharmacokinetics of ceftazidime in patients with renal insufficiency. *Antimicrob Agents Chemother* 1984; **25**: 201–4.
2. Leroy A, *et al.* Pharmacokinetics of ceftazidime in normal and uremic subjects. *Antimicrob Agents Chemother* 1984; **25**: 638–42.
3. Ackerman BH, *et al.* Effect of decreased renal function on the pharmacokinetics of ceftazidime. *Antimicrob Agents Chemother* 1984; **25**: 785–6.
4. Lin N-S, *et al.* Single- and multiple-dose pharmacokinetics of ceftazidime in infected patients with varying degrees of renal function. *J Clin Pharmacol* 1989; **29**: 331–7.
5. Kinowski J-M, *et al.* Multiple-dose pharmacokinetics of amikacin and ceftazidime in critically ill patients with septic multiple-organ failure during intermittent hemofiltration. *Antimicrob Agents Chemother* 1993; **37**: 464–73.
6. Demotes-Mainard F, *et al.* Pharmacokinetics of intravenous and intraperitoneal ceftazidime in chronic ambulatory peritoneal dialysis. *J Clin Pharmacol* 1993; **33**: 475–9.

Uses and Administration

Ceftazidime is a third-generation cephalosporin antibacterial with enhanced activity against *Pseudomonas aeruginosa*. It is used in the treatment of susceptible infections especially those due to *Pseudomonas* spp. They include biliary-tract infections, bone and joint infections, cystic fibrosis (respiratory-tract infections), endophthalmitis, infections in immunocompromised patients (neutropenic patients), melioidosis, meningitis, peritonitis, pneumonia, upper respiratory-tract infections, septicæmia, skin infections (including burns, ecthyma gangrenosum, and ulceration), and urinary-tract infections. It is also used for surgical infection prophylaxis. For details of these infections and their treatment, see under Choice of Antibacterial, p.162.

Administration and dosage. Ceftazidime is available as the pentahydrate but it is formulated with sodium carbonate, to form the sodium salt in solution, or with arginine. Doses are expressed in terms of anhydrous ceftazidime; ceftazidime pentahydrate 1.16 g is equivalent to about 1 g of anhydrous ceftazidime. It is given by deep intramuscular injection, slow intravenous injection over 3 to 5 minutes, or intravenous infusion over up to 30 minutes. The usual dose for adults ranges from 1 to 6 g daily in divided doses every 8 or 12 hours. The higher doses are used in severe infections especially in immunocompromised patients. In adults with cystic fibrosis who have pseudomonal lung infections, high doses of 90 to 150 mg/kg daily in 3 divided doses are used; up to 9 g daily has been given to those with normal renal function. Single doses of more than 1 g should be given intravenously.

Children are usually given ceftazidime 30 to 100 mg/kg daily in 2 or 3 divided doses, but in severely

ill children up to 150 mg/kg daily to a maximum of 6 g daily (9 g in cystic fibrosis with pseudomonal lung infection) may be given in 3 divided doses. Neonates and infants up to 2 months have been given 25 to 60 mg/kg daily in 2 divided doses.

In the elderly the dose should generally not exceed 3 g daily.

Although not licensed for nebulisation in the UK, the *BNFC* suggests a dose of 1 g inhaled twice daily for the management of chronic *Burkholderia cepacia* (*Pseudomonas cepacia*) infection in patients aged 1 month and older with cystic fibrosis.

For details of reduced doses in patients with renal impairment, see below.

For surgical infection prophylaxis in patients undergoing prostatic surgery, a dose of 1 g may be given at induction of anaesthesia and repeated if necessary when the catheter is removed.

Ceftazidime can be used with an aminoglycoside, another beta lactam such as piperacillin, or vancomycin in patients with severe neutropenia, or, if infection with *Bacteroides fragilis* is suspected, with an antimicrobial such as clindamycin or metronidazole. The drugs should generally be given separately (see also Incompatibility, above).

References.

1. Rains CP, *et al.* Ceftazidime: an update of its antibacterial activity, pharmacokinetic properties and therapeutic efficacy. *Drugs* 1995; **49**: 577–617.

Administration in renal impairment. In patients with renal impairment the dosage of ceftazidime may need to be reduced. After a loading dose of 1 g, maintenance doses are based on the creatinine clearance (CC):

- CC 31 to 50 mL/minute: 1 g every 12 hours
- CC 16 to 30 mL/minute: 1 g every 24 hours
- CC 6 to 15 mL/minute: 500 mg every 24 hours
- CC less than 5 mL/minute: 500 mg every 48 hours

In severe infections these doses may need to be increased by 50%. In these patients ceftazidime trough serum concentrations should not exceed 40 micrograms/mL. In patients undergoing peritoneal dialysis a loading dose of 1 g may be given followed by 500 mg every 24 hours; ceftazidime sodium may also be added to the dialysis fluid, usually 125 to 250 mg of ceftazidime for 2 litres of dialysis fluid. In patients undergoing haemodialysis a loading dose of 1 g is given and then 0.5 to 1 g after each dialysis period.

Preparations

USP 31: Ceftazidime for Injection; Ceftazidime Injection.

Proprietary Preparations (details are given in Part 3)

Arg.: Crima; Fortum; Pluseptic; Tinacef; Zidima; **Austral.:** Fortum; **Austria:** Fortum; Kefazim; **Belg.:** Glazidim; Kefadim†; **Braz.:** Cefazima†; Cef-tanorth†; Ceftazidim; Ceftef; Cetaz; Fortaz; Intracef; Kefadim; Roycefax†; **Canad.:** Ceptaz†; Fortaz; Tazidime†; **Chile:** Fortum; Kefzim†; **Cz.:** Fortum; Kefadim†; **Denm.:** Fortum; **Fin.:** Glazidim; **Fr.:** Fortum; Fortumset; **Ger.:** Fortum; InfectoZidim; **Gr.:** Cefin; Ceftazidim; Ftazidime; Lemoxol; Malocef; Novocral; Septax; Spieel; Solvetan; **Hong Kong:** Fortum; **Hung.:** Cetazime; Fortum; **India:** Cefazid; Cefazif; Cefcidin; Fortum; Zytaz; **Indon.:** Caltum; Cefum; Cetazum; Extimom; Fortum; Lacedim; Pharodime; Sodime; Thidim; Zefidim; Zibac; Zidifec; **Irl.:** Fortum; **Israel:** Fortum; **Ital.:** Cedizim; Cefim; Dizatec; Etazim; Fribat; Glazidim; Liotixil; Panzid; Spectrum; Starcef; Tazidif; Tottizim; **Malaysia:** Cef-4; Fortum; **Mex.:** Fenit; Fortum; Izadima; Lezi-dim†; Tagal; Taloken; Taxifur; Zadolina; Zidicef; **Neth.:** Fortum; Tazalux; **Norw.:** Fortum; **NZ:** Fortum; **Philipp.:** Baxidyne; Dimzef; Fortum; Forzid; Tazicef; Tazidan; Tazidem; Uniran; Zadim; Zeptrigen; **Pol.:** Biotum; Fortum; Mirocef; **Port.:** Cefortam; Ceftazim; Zidimox; **Rus.:** Bestum (Бестум); Fortum (Фортум); Lorazidime (Лоразидим); **S.Afr.:** Fortum; Kefzim†; Taziject; **Singapore:** Cefazime; Fortum; **Spain:** Fortum; Kefamin; **Swed.:** Fortum; **Switz.:** Fortum; **Thai.:** CEF-4; Cef-Dime; Cefodime; Dimase; Fortadim; Fortum; Forzid; Fourmox†; Zefat; **Turk.:** Fortum; Isestum; **UAE:** Negacef; **UK:** Fortum; Kefadim; **USA:** Ceptaz; Fortaz; Tazicef; Tazidime; **Venez.:** Betazidim; Biozidima; Cefgram; Fortum; Kesterina†.

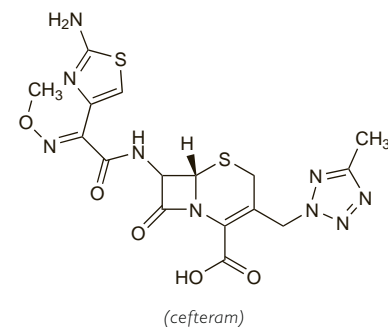
Cefteram Pivoxil (rINN)

Ceftéram, Pivoxil de; Cefteram pivoxilo; Cefterami Pivoxil; T-2588. Pivaloyloxymethyl (Z)-7-[2-(2-aminothiazol-4-yl)-2-methoxyiminoacetamido]-3-(5-methyl-2H-tetrazol-2-ylmethyl)-3-phenyl-4-carboxylic acid.

Цефтерама Пивоксил

$C_{22}H_{27}N_5O_7S_2 = 593.6$.

CAS — 82547-58-8 (cefteram); 82547-81-7 (cefteram pivoxil).



Pharmacopoeias. In Jpn.

Profile

Cefteram is a cephalosporin antibacterial used for the treatment of susceptible infections. It is given orally as the pivaloyloxymethyl ester, cefteram pivoxil, and doses are expressed in terms of cefteram; 186 mg of cefteram pivoxil is equivalent to about 150 mg of cefteram. The usual dose is 150 to 300 mg daily in 3 divided doses after meals. For severe infections, up to 600 mg daily may be given.

For reference to carnitine deficiency occurring after the administration of some pivaloyloxymethyl esters, see Pivampicillin, p.317.

Preparations

Proprietary Preparations (details are given in Part 3)

Jpn: Tomiron.

Ceftezole Sodium (rINN)

Ceftezol sódico; Cefézole Sodique; Natrii Ceftezolum. Sodium (7R)-7-[2-(1H-tetrazol-1-yl)acetamido]-3-(1,3,4-thiadiazol-2-ylthiomethyl)-3-cephem-4-carboxylate.

Натрий Цефтезол

$C_{13}H_{11}N_8NaO_4S_3 = 462.5$.

CAS — 26973-24-0 (ceftezole); 41136-22-5 (ceftezole sodium).

ATC — J01DB12.

ATC Vet — QJ01DB12.

Pharmacopoeias. In Chin.

Profile

Ceftezole is a cephalosporin antibacterial with properties similar to those of cefalotin (p.219). It is given as the sodium salt but doses are expressed in terms of the base; 1.05 g of ceftazole sodium is equivalent to about 1 g of ceftezole. The usual dose is 2 to 4 g daily by intramuscular injection in 2 or 3 divided doses.

Sodium content. Each g of ceftezole sodium contains about 2.16 mmol of sodium.

Preparations

Proprietary Preparations (details are given in Part 3)

Ital.: Alomen.

Ceftibuten (BAN, USAN, rINN)

Ceftibutène; Ceftibuteno; Ceftibutenum; Keftibuteeni; 7432-5; Sch-39720. 7-[2-(2-Amino-1,3-thiazol-4-yl)-4-carboxyisocrotonamide]-3-cephem-4-carboxylic acid.

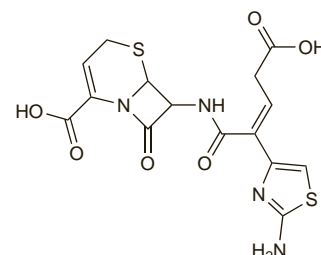
Цефтибутен

$C_{15}H_{14}N_4O_6S_2 = 410.4$.

CAS — 97519-39-6.

ATC — J01DD14.

ATC Vet — QJ01DD14.



Pharmacopoeias. Jpn includes the dihydrate.

The symbol † denotes a preparation no longer actively marketed