For the use only of a Registered Medical Practitioner or a Hospital or a Laboratory.

CEPODEM

(Cefpodoxime Proxetil Tablets/Suspension)

COMPOSITION

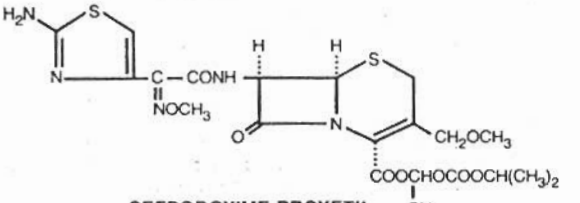
CEPODEM TABLETS 100 mg
Each film-coated tablet contains :
Cefpodoxime Proxetil
equivalent to Cefpodoxime 100 mg

CEPODEM TABLETS 200 mg
Each film-coated tablet contains :
Cefpodoxime Proxetil
equivalent to Cefpodoxime 200 mg

CEPODEM SUSPENSION 50 mg/5 ml
Each 5 ml of constituted suspension contains :
Cefpodoxime Proxetil
equivalent to Cefpodoxime 50 mg

CEPODEM SUSPENSION 100 mg/5 ml
Each 5 ml of constituted suspension contains :
Cefpodoxime Proxetil
equivalent to Cefpodoxime 100 mg

DESCRIPTION[1]
Cefpodoxime proxetil is an extended spectrum third generation oral cephalosporin. It is a pro drug of cefpodoxime. Cefpodoxime proxetil is chemically designated as RS-1-(isopropoxycarbonyloxy)ethyl (+)-6R,7R-7-(2- (2-amino-4-thiazolyl)-2- ((Z)-methoxyimino) acetamido)-3-methoxymethyl -8-oxo-5thia-1-azabicyclo (4.2.0)oct-2-ene-2 carboxylate. The empirical formula of cefpodoxime proxetil is $C_{21}H_{27}N_5O_9S_2$ and its molecular weight is 557.61.



CEFPODOXIME PROXETIL
STRUCTURAL FORMULA

PHARMACOLOGY[1]

Mechanism of Action
The antibacterial action of cefpodoxime is through inhibition of bacterial cell wall synthesis probably by acylation of membrane bound transpeptidase enzymes; this prevents cross linkage of peptidoglycan chains, which is necessary for bacterial cell wall strength and rigidity.

Antibacterial Spectrum
Cefpodoxime proxetil is active against gram positive and gram negative bacteria. It is stable in presence of beta-lactamases. Antibacterial spectrum includes *Staphylococcus aureus* excluding methicillin resistant staphylococci, *Streptococcus pyogenes, Streptococcus pneumoniae, Steptococcus agalactiae* and other Streptococcus spp. (Groups C,F,G). Gram-negative organisms susceptible to cefpodoxime include β-lactamase and non β-lactamase producing strains of *H.influenzae, H. para-influenzae, Moraxella catarrhalis, Neisseria meningitidis, Neisseria gonorrhoea, E.coli, Klebsiella pneumoniae, Proteus vulgaris, Providencia rettgeri and Citrobacter diversus.* Cefpodoxime is also active against peptostreptococcus spp.

Susceptibility Testing
The interpretation of zone diameter in disc diffusion testing using a 10 mcg disc are as follows

Zone diameter (mm)	Interpretation
≥ 21	(S) Susceptible
18-20	(I) Intermediate
≤ 17	(R) Resistant

PHARMACOKINETICS
Following oral administration, cefpodoxime proxetil is absorbed and rapidly hydrolysed to cefpodoxime. In the intestinal epithelial cells, the ester group is cleared off so that the entity entering the blood stream is cefpodoxime. Following a 100 mg dose, mean peak plasma concentration of 1.4 mcg/ml is achieved in about 2 hours. The extent of absorption and mean peak plasma concentration are increased when cefpodoxime is administered with food; the AUC increases by 33% in fed subjects. Plasma protein binding is about 29%. Tissue concentrations of cefpodoxime following different doses of cefpodoxime - proxetil are shown below :

Concentration of **CEPODEM** *in tissues :*

Dose	Tissue	Concentration mcg/g
100 mg	Tonsil	0.24
200 mg	Lung	0.63
200 mg	Skin Blister	1.6

There is minimal metabolism of cefpodoxime *in vivo.* About 33% of the administered dose is eliminated unchanged in the urine. Plasma elimination half-life is about 2.8 hours.

INDICATIONS[1]
CEPODEM is indicated for the treatment of the following infections :
1. Upper respiratory tract infections, including acute otitis media, sinusitis, tonsillitis and pharyngitis.

2. Acute community acquired pneumonia.
3. Acute uncomplicated gonorrhoea.
4. Uncomplicated urinary tract infections.
5. Skin and skin structure infections.

DOSAGE

Adults

◆ Upper respiratory tract infections, including tonsillitis and pharyngitis	:	100 mg 12 hourly for 10 days.
◆ Acute community acquired pneumonia	:	200 mg 12 hourly for 14 days.
◆ Acute uncomplicated gonorrhoea	:	200 mg single dose.
◆ Uncomplicated urinary tract infections	:	100 mg 12 hourly for 7 days.
◆ Skin and skin structure infections	:	400 mg 12 hourly for 7 to 14 days.

CHILDREN

Acute otitis media	:	10 mg/kg/day (max. 400 mg/day in two divided doses) for 10 days.
Pharyngitis and tonsillitis	:	10 mg/kg/day (max. 200 mg/day in two divided doses) for 10 days.

CEPODEM should be administered with food. In patients with renal dysfunction (creatinine clearance < 30 ml/min), the dosing interval should be increased to 24 hours. Dose adjustment is not necessary in patients with cirrhosis.

PRECAUTIONS

◆ **General**
It is important to consider the diagnosis of pseudomembranous colitis in patients who present with diarrhoea subsequent to the administration of cefpodoxime proxetil.

◆ **Warnings**
Particular care will be needed in patients who have had an anaphylactic response to penicillin. **CEPODEM** should not be given to those patients with a previous history of hypersensitivity to cephalosporins or other β-lactams. Allergic reactions are particularly likely in patients with a history of allergies.

◆ **CONTRAINDICATIONS**
CEPODEM is contraindicated in patients with history of hypersensitivity to cefpodoxime proxetil.

◆ **Pregnancy and Lactation**
Studies carried out in several animal species have not shown any teratogenic or fetotoxic effects; however, cefpodoxime may be administered to pregnant women only if clearly indicated. Because of the potential for serious reactions in nursing infants, a decision should be made whether to discontinue nursing or to discontinue the drug.

◆ **Carcinogenicity/Mutagenicity**
Long term animal carcinogenicity studies have not been performed.
Mutagenesis studies of cefpodoxime including Ames test, chromosome aberration test, the forward gene mutation assay and *in vivo* micronuclear test were negative.

◆ **Laboratory value alteration**
Cephalosporins are known to induce a positive direct Coombs' test.

◆ **Adverse effects**
Adverse effects reported in clinical trials are mild & transient and include diarrhoea, nausea, vomiting, abdominal pain, colitis and headache. Rarely hypersensitivity reactions, rash, pruritus, dizziness, thrombocytosis, thrombocytopenia, leucopenia or eosinophilia may occur.

◆ **Drug Interactions**
Plasma concentrations are decreased by approximately 30% when cefpodoxime proxetil is administered with antacids or H_2 blockers. Close monitoring of renal function is advised when **CEPODEM** is administered concomitantly with compounds of known nephrotoxic potential. Plasma levels of cefpodoxime increase when **CEPODEM** is given with probenecid.

◆ **Overdosage and treatment**
Overdosage with cefpodoxime proxetil has not been reported. The symptoms following an overdose may include nausea, vomiting, epigastric distress and diarrhoea. In the event of serious toxic reaction from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of cefpodoxime from the body, particularly if renal function is compromised.

STORAGE

Store below 25°C, protected from light and moisture.

Keep all medicines out of the reach of children.

SUPPLY

CEPODEM TABLETS 100 - Strip of 6's & Box of 5 x 6's
CEPODEM TABLETS 200 - Strip of 6's & Box of 5 x 6's
CEPODEM SUSPENSION 50 mg/5ml - Bottle of 60 ml
CEPODEM SUSPENSION 100 mg/5ml - Bottle of 60 ml

REFERENCES :
1. *Mosby's Gen Rx - The complete drug reference. 1998. 8th Ed. pp. 383.*
2. *ABPI - Datasheet Compendium 1996 . pp.1496, Datapharm Publications Limited, London.*

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