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Contributors

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Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

Wellcome introduces CEFIZOX

ceftizoxime sodium



excellent
in vivo



Wellcome

The Wellcome Foundation Ltd

Crewe Hall Crewe Cheshire CW1 1UB

cables Wellcome Crewe

telex 36348 telephone 0270 583151

Dear Doctor,

What do you look for in an injectable antibiotic?

If you look for broad-spectrum antibacterial activity, resistance to a wide range of β -lactamases, effective tissue penetration, simple dosage, excellent tolerability and proven clinical success, you'll find CEFIZOX (ceftizoxime sodium) highly suited to your clinical needs. Cefizox is a highly active, third generation injectable cephalosporin. It has a wide spectrum of activity against both Gram-negative and Gram-positive aerobic and anaerobic organisms, including *E. coli*, *Klebsiella pneumoniae*, *Staph. aureus*, and *Strep. pyogenes*.

CEFIZOX

Ceftizoxime sodium for injection

Excellent *in vivo*

Powerful, third generation injectable cephalosporin.

Broad spectrum of antibacterial activity: - aerobic and anaerobic Gram+ and Gram- pathogens.

Superior β -lactamase resistance. More resistant than cefotaxime.

Effective tissue penetration.

Easily exceeds MIC after one dose.

Higher tissue concentrations than cefotaxime after equivalent doses.

cont/...

Cefizox is also active against hospital opportunist pathogens not so frequently encountered, such as indole-positive *Proteus*, *Serratia marcescens*, *Morganella morganii*, and *Enterobacter*.

If any of these are a problem at your hospital, you should consider Cefizox.

One of the major factors that contributes to the excellent spectrum of activity offered by Cefizox, is its superior β -lactamase stability. Cefizox is resistant to a wider range of β -lactamases than many other cephalosporins, and is even more resistant than cefotaxime!

Cefizox also offers excellent tissue penetration. After a single dose, concentrations of Cefizox in most tissue and body fluids are easily in excess of the MIC of likely pathogens. These sites include ascites, pleural fluid, amniotic fluid, bile, prostate tissue, biliary tissue, uterus, cardiac atrium, bone, inflamed CSF, and sputum.²

Study has shown that tissue concentrations of Cefizox are higher than those of cefotaxime, after equivalent doses.² And, unlike cefotaxime, Cefizox is not metabolised. Thus, the full therapeutic effect of Cefizox is maintained.³

CEFIZOX – potential during the 1980s A clinical opinion

The activity of 'third generation cephalosporins [is] analogous to the combination of an aminoglycoside and an older penicillin.'

'There is a need for new compounds of this type... this compound [Cefizox] is effective... and well tolerated.'

'[Cefizox] would be useful in hospital-acquired Gram-negative respiratory infections ... [and it] will prove useful in nosocomial sepsis due to multi-resistant strains.'

Neu¹⁰

Summary of clinical efficacy by disease⁶

Infection	Bacteriological response	Clinical response
Respiratory tract	92.9%	91.5%
Genito-urinary tract	94.7%	96.5%
Skin and soft tissue	94.5%	97.3%
Intra-abdominal	100.0%	96.4%
Septicaemia		
primary	92.1%	89.2%
secondary	98.0%	
Bone and joint	80.6%	84.4%
Gonorrhoea		
males	100.0%	100.0%
females	95.0%	100.0%
Compromised patients (neutropenic)	86.2%	67.3%

As you would anticipate with an agent of such favourable bacteriological and pharmacokinetic profile, clinical trials have demonstrated the efficacy of Cefizox in diverse infections.

Extensive clinical experience confirms that Cefizox is excellent against opportunist hospital pathogens.^{4,5}

Cefizox has been shown to be highly effective against lower respiratory tract infections, genito-urinary tract infections including gonorrhoea, intra-abdominal infections, septicaemia, and skin and soft tissue infections.⁶

Cefizox has also been notably successful in infections resistant to ampicillin, carbenicillin, cefamandole, tobramycin or gentamicin.⁴

And Cefizox has proved suitable for use in neutropenic patients and children.^{7,8}

Cefizox is well tolerated in the vast majority of patients. Only minor adverse reactions have been reported, and none that have not been found after use of other cephalosporins.⁹

Dosage is simple, generally two or three times daily.

With broad-spectrum anti-bacterial potency, proven efficacy and a low level of side-effects, Cefizox is a logical choice in a serious infection.

The use of Cefizox is especially appropriate before the infecting pathogen is identified, where multiple infection is suspected, or the infection is resistant to other cephalosporins, aminoglycosides or penicillins.

Yours faithfully,

WELLCOME MEDICAL DIVISION

P.S. A Data Sheet is enclosed, and extensive clinical information about Cefizox, an outstanding, third generation injectable cephalosporin, is available from Wellcome. For further information, please complete and return the enclosed reply-paid card.

Summary of clinical efficacy by pathogen⁶

Pathogen	% success
Staph. aureus	96.9
Staph. epidermidia	87.5
Str. pneumoniae	100.0
Str. pyogenes	98.3
Streptococcus spp.	92.3
E. coli	97.9
Klebsiella spp.	97.7
Pr. mirabilis	100.0
Indole-positive Proteus	78.6
Enterobacter spp.	77.1
Citrobacter spp.	90.9
Serratia spp.	73.7
Ps. aeruginosa	70.0
Pseudomonas spp.	100.0
H. influenzae	100.0
Bact. fragilis	91.7
Bacteroides spp.	95.6
Anaerobic cocci	95.5
N. gonorrhoea	99.2
N. meningitidis	100.0
Clostridium spp.	100.0
Other anaerobic rods	80.0

References

1. Simpson, I.N. *et al* (1982), *J. Antimicrob. Chemother.*, **9**, 357.
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3. Quintiliani, R. and Nightingale, C.H. (1982), *ibid.*, **99**.
4. Neu, H.C. (1982), *ibid.*, **193**.
5. Scully, B.E. and Neu, H.C. (1982), *ibid.*, **141**.
6. Parks, D. *et al* (1982), *ibid.*, **327**.
7. Lawson, R.D. and Baskin, R.C. (1982), *ibid.*, **159**.
8. Shikuma, C.M. *et al* (1982), *ibid.*, **293**.
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Cefixim Prescribing Information

Presentation: Vials containing 500mg, 1g and 2g of cefixime as the sterile sodium salt.

Uses: Broad-spectrum, bactericidal, cephalosporin antibiotic. Indications include lower respiratory tract infections, genito-urinary tract infections including gonorrhoea, intra-abdominal infections, septicaemia, skin and soft tissue infections. Cefixim is active against a wide range of Gram-positive and Gram-negative organisms and is stable to a broad spectrum of β -lactamases produced by both aerobic and anaerobic organisms.

Dosage and administration: By slow intravenous injection, by continuous or intermittent intravenous infusion, or by deep intramuscular injection. Modification of the following guideline dosages is necessary in patients

with impaired renal function (see Data Sheet). **Adults:** urinary tract infection, 0.5-1g 12-hourly, IM or IV; gonorrhoea, 1g single dose, IM; other infections, 1-2g 8-12 hourly, IM or IV; severe or life-threatening infections, 2-3g 8-hourly, IM or IV. **Children over the age of 3 months:** 30-60mg/kg bodyweight/day in 2-4 divided doses, increased in severe or life-threatening infections to 100-150mg/kg bodyweight/day. The total dose should not exceed the adult dose. **Under the age of 3 months:** insufficient data to recommend use.

Contra-indications: Hypersensitivity to cephalosporin antibiotics.

Precautions: Renal status should be monitored, especially in seriously ill patients receiving maximum dose therapy and co-administration of aminoglycoside antibiotics. Although the occurrence has not been reported with Cefixim, nephrotoxicity has been reported following concomitant administration of other cephalosporins and aminoglycosides. As with any antibiotic, prolonged use may result in overgrowth of non-susceptible organisms. Caution in penicillin-sensitive patients because of possible cross-reaction.

Side- and adverse effects: Cefixim is generally well tolerated. The most common adverse reactions have been local following IM or IV injection. These include burning, cellulitis, pain, induration, tenderness, paraesthesia and phlebitis. Other adverse reactions include hypersensitivity reactions (rash, pruritis, fever), gastrointestinal

disturbance (diarrhoea, nausea, and vomiting), vaginitis, transient eosinophilia, thrombocytosis. Neutropenia, leucopenia and thrombocytopenia have been reported rarely. Some individuals have developed a positive Coombs' test. Transient elevation in SGOT, SGPT, alkaline phosphatase, BUN and serum creatinine have occasionally been observed.

Use in pregnancy and lactation: There are no data in pregnant women, thus the benefit of using Cefixim in pregnancy should be weighed against the possible hazard. Caution should be exercised if Cefixim is administered to a nursing mother.

Basic NHS Costs: 1x500mg vial (PL3/0174) £2.76; 1x1g vial (PL3/0175) £5.50; 1x2g vial (PL3/0175) £11.00.

Further information is available on request.

Made by Fujisawa Pharmaceutical Co Ltd, Osaka, Japan, for The Wellcome Foundation Ltd, London.



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