

**CEFTRIAXONE SODIUM
AND
TAZOBACTAM SODIUM
FOR INJECTION
(I.M and I.V use)**

ANTIBIOTIC

INTRODUCTION

Ceftriaxone Sodium is a third generation cephalosporin belonging to beta lactam group of antibiotics. It is a broad spectrum bactericidal parenteral cephalosporin. The bactericidal action of Ceftriaxone is believed to be due to inhibition of cell wall synthesis leading to lysis of the bacterial cell.

Tazobactam Sodium, a triazolylmethyl penicillanic acid sulfone, is a new beta lactamase inhibitor with a range of activity that includes extended spectrum plasmid mediated beta lactamases. Tazobactam lacks significant antibacterial activity of its own. By rendering β -lactamase inactive, tazobactam is able to protect the activity of various β -lactam antibiotics. Tazobactam does not appear to have β -lactamase inducing properties.

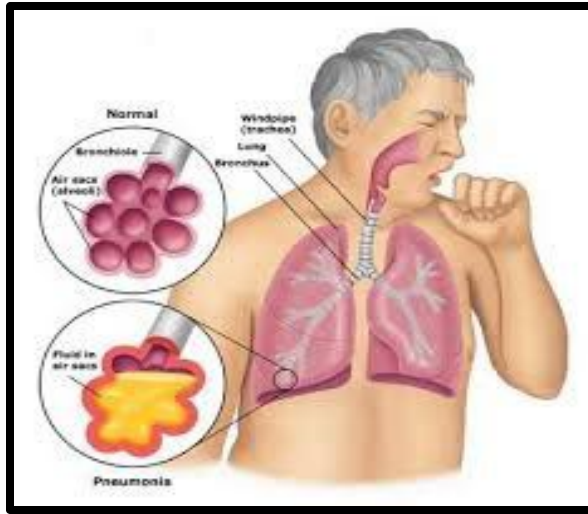
THE NEED FOR A BETA-LACTAM- BETA LACTAM INHIBITOR COMBINATION ANTIBIOTIC

The combination of ceftriaxone (3rd generation cephalosporin) and Tazobactam (Beta lactamase inhibitor) provides a solution for treatment of such bacterial infections caused by beta lactamase resistant pathogens.

Tazobactam has been combined with various beta lactam antibiotics to enhance:-

- 1) Their antibacterial potency.
- 2) Overcome bacterial resistance due to beta lactamase production.

INDICATIONS AND USAGE



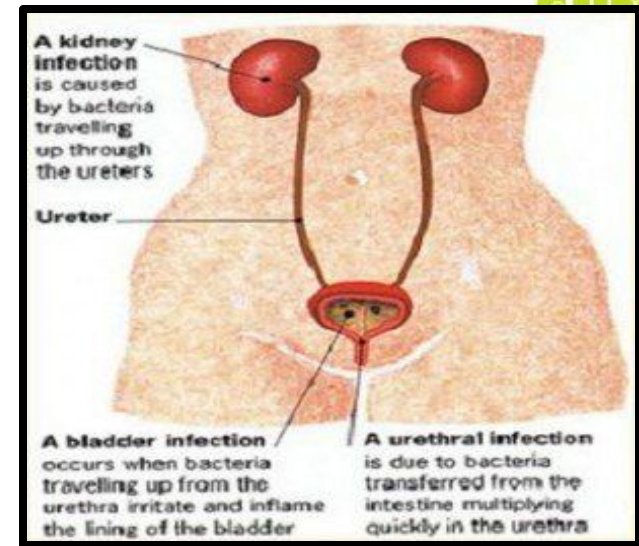
Lower respiratory tract infections and community-acquired pneumonia



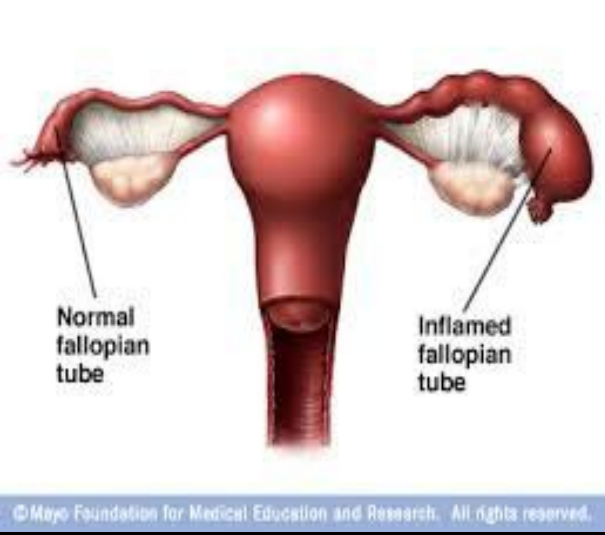
Skin and skin structure infections



Acute bacterial otitis media



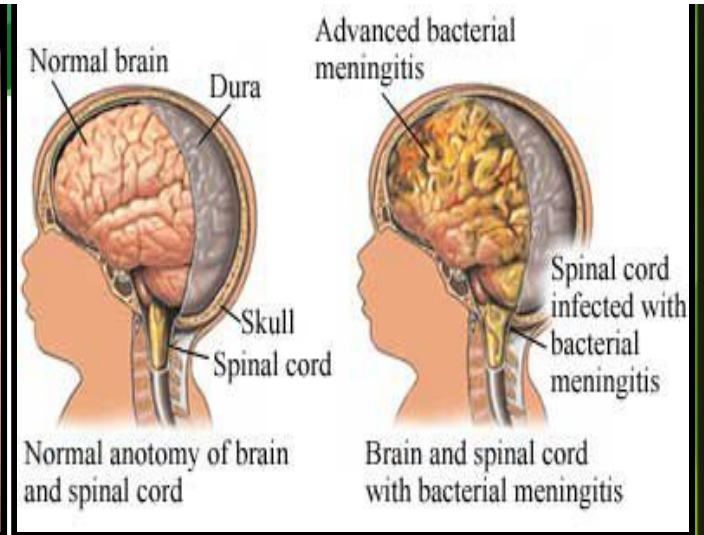
Urinary tract infections



Pelvic inflammatory disease



Bacterial septicemia



Bacterial Meningitis

- Uncomplicated gonorrhoea
- Intra-abdominal infections
- Commonly used for surgical prophylaxis – prevention of bacterial infection before and after surgery



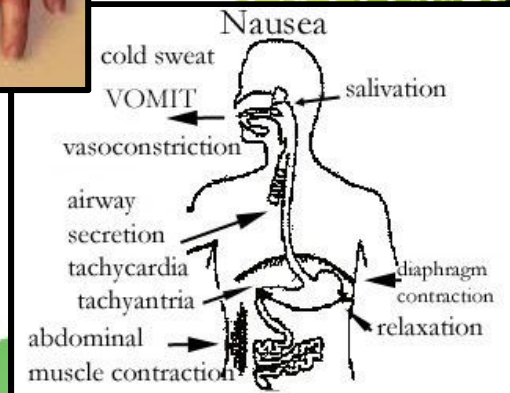
Usage and dosage

- Intravenous administration using sterile water for injection 0.9% sodium chloride injection after the dissolution of this product added to the 5% glucose injection, 0.9% sodium chloride sodium injection or intravenous infusion of 5% sodium chloride injection 250ml. The infusion time of 1 hour.
- Adults and children over 12 years, weight 50kg or more children using the adult dose, usually a daily dose of 2.0 ~ 4.0g, 1 ~ 2 times dose.
- 12 years of age children, the daily 40mg/kg, in 1 or 2 times to give.

Adverse drug reactions

Common adverse drug reactions (ADRs) for the β -lactam antibiotics include

- Diarrhea
- Nausea
- Rash
- Urticaria
- Superinfection (including) Candidacies
- Pain and inflammation at the injection site is also common for parenterally administered β -lactam antibiotics.



Contraindications

It is contraindicated in Hypersensitivity to cephalosporins and beta lactamase inhibitors.



SPECIAL WARNINGS AND PRECAUTIONS FOR USE.....

Although the transient elevations of BUN and serum creatinine have been observed at the recommended dosage the nephrotoxic potential of Ceftriaxone / Tazobactam is similar to that of other cephalosporins.

Ceftriaxone / Tazobactam should be prescribed with caution in individuals with a history of gastrointestinal disease especially colitis.

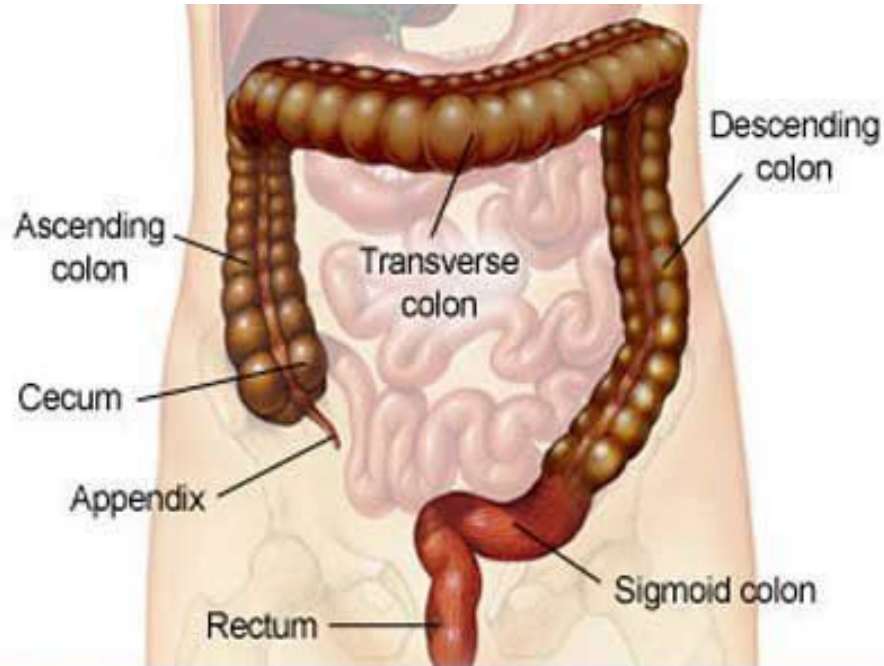
Alterations in prothrombin times have occurred rarely in patients treated with ceftriaxone tazobactam.

PRECAUTIONS

Probenecid; aminoglycosides; vecuronium, methotrexate;oral anticoagulants; heparin.

Potentially Fatal:

- Pseudomembranous colitis.
- Disulfiram like reaction with alcohol.
- Nephrotoxicity with aminoglycosides and furosemide.



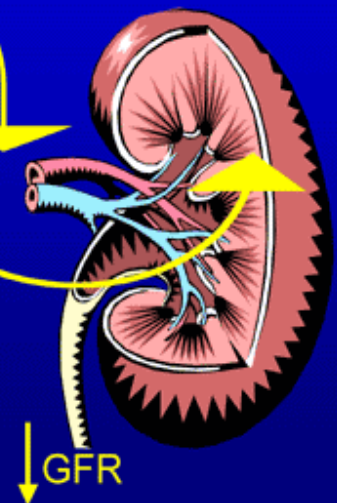
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Mechanism of CNI Nephrotoxicity

- Acute toxicity (reversible)
 - Afferent arteriolar vasospasm
 - Renal hypoperfusion
- Chronic toxicity (irreversible)
 - Renal hypoperfusion
 - Obliterative arteriopathy
 - Focal ischemia
 - Tubular atrophy
 - Interstitial fibrosis
 - Glomerulosclerosis



Advantages of using Ceftriaxone in comparison with other cephalosporins

- Ceftriaxone is a long acting, broad-spectrum cephalosporin antibiotic for parenteral use.
- Ceftriaxone exerts in vitro activity against a wide range of Gram-negative and Gram-positive microorganisms.
- Ceftriaxone is highly stable to most beta-lactamases, both penicillinases and cephalosporinases, of Gram-positive and Gram-negative bacteria.

