

ACTIVE LEARNING TEMPLATE: Medication

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MEDICATION Ceftriaxone REVIEW MODULE CHAPTER CATEGORY CLASS Antibiotic, Cephalosporin (third Gen)

PURPOSE OF MEDICATION

Expected Pharmacological Action

Binds to penicillin binding proteins within bacterial cell walls, inhibiting the final, crucial step in peptidoglycan synthesis. This med can target gram-negative and gram-positive bacteria

Therapeutic Use

This drug is used to treat/prevent bacterial infections. It works by killing bacteria or preventing their growth

Complications

Use extreme caution in neonates due to risk of hyperbilirubinemia, particularly in premature infants. Significant drug interactions exist requiring dose/frequency adjustment or avoidance.

Medication Administration

Vials should be reconstituted with appropriate volume of diluent to make a final concentration of 250mg/ml or 350mg/ml. Infusion if prepared in two stages, initial reconstitution of powder, followed by dilution to final infusion solution. When preparing piggyback bottle, reconstitute powder with appropriate IV dilution to have resulting solution of 100mg/ml. Begin intermittent infusion over 30 mins. IV push over 1-4 minutes has been well tolerated; a 2g IV push over 5 mins resulted in Tachycardia, restlessness, diaphoresis, palpitations

Contraindications/Precautions

Do not administer with Calcium containing solutions. May be associated with increased INR especially with prolonged treatment, those hepatic or renal malfunction. Prolonged use can result in bacterial super infection.

This med crosses the placenta.

Nursing Interventions

- Check Known Allergies
- Closely monitor for side effect or allergic reaction within 30-60 mins following administration
- Check labs to ensure the bacteria is susceptible to Ceftriaxone
- Avoid administering with lactated ringers' solution, calcium. Check off with all other drug interactions

Interactions

Cephalosporins may increase the nephrotoxic effects of Aminoglycosides. Antibiotics may decrease therapeutic effects of Bacillus Calmette Guerin. Calcium binds to calcium, forming an insoluble precipitate, creating increased adverse/toxic effects of Ceftriaxone. Antibiotics may decrease the therapeutic effects of fecal micro biota within the oral region and Rectal region.

Client Education

It would be useful to educate client to drink plenty of fluids (Unless restricted), contact your medical provider if noticing signs of allergic reaction, C-diff associated Diarrhea. This drug may affect certain lab results, use for the exact allowed time which was given with the dose, tell your medical provider if pregnant or breastfeeding.

Evaluation of Medication Effectiveness

- Labs like CBC to check WBC count and to gauge if infection is still present.
- Clinical improvement in client signs
- Vital signs improving
- Decreased cough, decreased sputum, improved RR/breath sounds, decreased fever, decreased urine frequency, clear urine, decreased headache, improved consciousness

