Rocephin (ceftriaxone) and Calcium Interaction: UPDATED SAFETY INFORMATION

- In May 2007, the prescribing information for Rocephin® (ceftriaxone) added new information about the interaction between ceftriaxone and calcium-containing products based on post-marketing reports in neonates. In August 2007, the full prescribing information extended the pediatric warning to adults as well. In September 2007, the PBM issued a NATIONAL PBM Bulletin highlighting the issue.
- On April 14, 2009, the Food and Drug Administration (FDA) released Information for Healthcare Professionals addressing revisions to the product package insert regarding the potential for precipitation when Rocephin® (ceftriaxone) is administered concomitantly with calcium-containing products.
- Roche, the manufacturer of Rocephin® (ceftriaxone), conducted two studies (in vitro) to evaluate precipitation formation when Rocephin® (ceftriaxone) and calcium-containing products are mixed in vials and infusion lines.
  - The studies used neonatal and adult plasma.
  - The studies used varying ceftriaxone and calcium concentrations.
- Based on the results of these studies, FDA has UPDATED its original recommendations to those listed below:
  - Ceftriaxone and calcium-containing products may be used concomitantly in patients >28 days of age because the risk of precipitation is low in this population. FDA had previously recommended, but no longer recommends, that in all age groups ceftriaxone and calcium-containing products should not be administered within 48 hours of one another.
  - In patients >28 days of age, ceftriaxone and calcium-containing products may be administered sequentially, provided the infusion lines are thoroughly flushed between infusions with a compatible fluid.
  - Ceftriaxone must not be administered simultaneously with intravenous calcium-containing solutions via a Y-site in any age group.
  - Concomitant use of ceftriaxone and intravenous calcium-containing products is contraindicated in neonates (<28 days of age). Ceftriaxone should not be used in neonates (<28 days of age) if they are receiving (or are expected to receive) calcium-containing intravenous products.
- The following recommendations from the FDA remain the same:
  - Diluents containing calcium, such as Ringer’s solution or Hartmann’s solution, should not be used to reconstitute Rocephin® (ceftriaxone). Particulate formation can result.
  - There are no data available on the potential interaction of ceftriaxone with oral calcium-containing products.
  - There are no data available on the potential interaction of intramuscular ceftriaxone with oral or intravenous calcium-containing products.

REFERENCES

ACTIONS:
- Facility COS: Forward this document to all appropriate providers who prescribe this agent (e.g., primary care providers and infectious disease specialists, including contract providers, etc.). In addition, forward to the Associate Chief of Staff (ACOS) for Research and Development (R&D). Forward to other VA employees as deemed appropriate.
- ACOS for R&D: Forward this document to Principal Investigators (PIs) who have authority to practice at the facility and to your respective Institutional Review Board (IRB).