Calcium Channel Blocker Poisoning/Overdose

Aliases
Anti-hypertensive

Patient Care Goals
1. Reduce GI absorption of oral agents with some form of binding agent (activated charcoal) especially for extended release
2. Early airway protection is required as patients may have rapid mental status deterioration
3. Assure adequate ventilation, oxygenation, and correction of hypoperfusion

Patient Presentation
Calcium channel blockers interrupt the movement of calcium across cell membranes. Calcium channel blockers are used to manage hypertension, certain rate-related arrhythmias, prevent cerebral vasospasm, and angina pectoris. Patients may present with:
1. Bradycardia
2. Hypotension
3. Decreased AV nodal conduction
4. Cardiogenic shock
5. Hyperglycemia

Inclusion Criteria
1. Patients who have may have taken/been administered calcium channel blockers
   a. Calcium channel blocker examples:
      i. Amlodipine (Norvasc®)
      ii. Diltiazem (Cardizem®, Tiazac®)
      iii. Felodipine
      iv. Isradipine
      v. Nicardipine
      vi. Nifedipine (Adalat CC®, Afeditab CR®, Procardia®)
      vii. Nisoldipine (Sular®)
      viii. Verapamil (Calan®, Verelan®)

Exclusion Criteria
None noted

Patient Management

Assessment
1. Assess ABCDs and, if indicated, expose, and then cover to assure retention of body heat
2. Vital signs including temperature
3. Apply a cardiac monitor, examine rhythm strip for arrhythmias, and consider obtaining a 12-lead EKG
4. Check blood glucose level
5. Monitor pulse oximetry and $EtCO_2$ for respiratory decompensation
6. Identify specific medication taken (noting immediate release vs. sustained release formulations), time of ingestion, and quantity