Guidelines for Use of Caffeine Citrate Therapy (Cafcit®)

**Recommended Neonatal Dose, Route, and Interval:**
Loading dose: 20 mg/kg/dose IV over 30 minutes or PO
Maintenance dose: 5 mg/kg/dose Q day IV or PO - started 24 hrs after loading dose
Orders must be written as Caffeine Citrate.

**Chief Indications:**
1. Control neonatal apnea (decrease frequency)
2. Mild bronchodilatation
3. Mild diuretic

**Possible Adverse Reactions:**
1. Restlessness, irritability, agitation, insomnia
2. Vomiting, gastric irritation
3. Tachycardia, arrhythmia, tachypnea
4. Diuresis
5. Convulsions

**Contraindications & Precautions:**
1. Hypersensitivity to caffeine
2. Use with caution in patients with gastritis, seizure disorders (oral form)
3. Presence of arrhythmias

**Monitoring:**
1. Trough levels (take with AM labs)- begin monitoring around the 5th dose
2. Therapeutic serum levels: 5 - 25 mcg/ml
3. Toxic serum levels: > 40 - 50 mcg/ml

**Nursing Implications**
1. Monitor heart rate. Consider withholding dose if heart rate > 180 BPM.
2. Assess for agitation.
3. Give oral dose with the nearest feed starting after 1200.
4. Overdose treatment - short acting barbiturate PR.
5. IV Cafcit loading and maintenance doses will be prepared as syringes at a concentration of 5mg/mL for individual patients. They will be stored at room temperature in the bedside carts.

**Special Considerations and Calculations**
1. Drug interactions:
   - Resulting in increased caffeine levels: fluconazole, ketoconazole
   - Resulting in decreased caffeine levels: phenytoin, fosphenytoin, Phenobarbital
   - Other notable drug interactions: beta-adrenergic agonists (Dopamine, Dobutamine) may cause an elevation in heart rate; Adenosine – caffeine decreases the efficacy of adenosine by blocking adenosine receptor sites, therefore higher adenosine doses may be required for cardioversion.
2. Peak effect: 2 hours; half-life: 40 - 230 hours, decreasing with advancing postconceptual age. Half-life is prolonged in infants with cholestatic hepatitis
3. Rapidly absorbed from GI tract
4. IV - PO conversion 1:1

References:
1. Neofax 2009

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