Guidelines for the Use Levothyroxine (Synthroid®)

Recommended Neonatal Dose, Route, and Interval

- **Initial oral dose:** 10-14 mcg/kg/dose PO Q 24 hours
  - (37.5 to 50 mcg/dose for an average term infant).
  - Dosage is adjusted in 12.5 mcg increments.
  - Give oral doses one hour before or 2 hours after feeds, preferably in the morning.

- **Initial IV dose:** 5-8 mcg/kg/dose Q24 hours. Give IV push over 3-5 minutes

Chief Indications

Treatment of Hypothyroidism

Possible Adverse Reactions:
1. Thyrotoxicosis, e.g. tachycardia, irritability, diarrhea, fever, insomnia
2. Acceleration of bone age with prolonged treatment

Contraindications & Precautions

- Hypersensitivity to levothyroxine
- Thyrotoxicosis or uncorrected adrenal insufficiency
- Neonates should be monitored for cardiac overload, arrhythmias, and aspiration from avid suckling

Nursing Implications

- Monitor blood pressure, heart rate
- Monitor T4/TSH at 2 weeks of age, then every 1-2 months and 2 weeks after any change in dose.
- **Do NOT give injectable form orally.** (crystallizes in acid)
- Give oral doses one hour before or 2 hours after feeds, preferably in the morning.
- Use only NS for reconstitution. Recommend reconstitute to a final concentration of 20 mcg/mL. IV formulation must be used immediately after reconstitution.
- Do not add to any other IV solution.

References:
1. Neofax 2009

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