

## **PEDIATRIC ENDOCRINOLOGY:**

### **Hyperthyroidism**

**1. Definition:** TSH level < 0.1 uIU/ml, and free T4 > 2.2 ng/dl

**2. Relevant Information:**

- Patient is asymptomatic, or has heat intolerance, inability to concentrate, tiredness, weight loss, diarrhea, palpitations
- Family History: Thyroid disorders, autoimmune disease
- Past Medical Problems: autoimmune disease

**3. Physical Exam:**

- HR- high for age
- BP – normal for age
- Skin- normal
- Eyes- exophthalmous, lid-lag, stare, prominent
- Genitalia – normal or exaggerated
- Thyroid- increased in size or normal, asymmetric fullness, bruit

**4. Initial Screening Studies:**

Serum: (normal values)

TSH 0.10 - 5.0 uIU/ml

Free T4 1.0-2.2 ng/dl

Total T4 5.0-10.6 ug/dl

Antithyroid antibodies- negative

Thyroid stimulating antibodies (TSI)- < 120%

**Optional Imaging:**

Ultrasound- enlarged, hypervascular with Graves disease

- look for nodule

123I uptake - diffuse increased uptake with Graves disease (>25% at 24 hrs) or

"hot" nodule present

**5. Disposition:**

- a) Routine follow-up if all findings and lab screening tests are normal
- b) Referral if abnormalities on examination or screening test
- c) Referral to Yale Pediatric Thyroid Center (Scott Rivkees, MD) Telephone 203-737-5971, Fax 203-737-5972.

<http://www.yalepediatrics.org/thyroid/index.html>