

Thyroid Storm

- Hypermetabolic state induced by excessive release of thyroid hormones
- Symptoms
 - Psych!
 - Anxiety, restlessness, manic behavior
 - Tachycardia out of proportion to fever
 - Fever
 - Signs of hyperthyroidism
- Treatment – BPID
 1. **Beta blocker**, blocks peripheral conversion of T4 to T3
 2. **PTU**, blocks the synthesis of thyroid hormone and inhibits conversion of T4 to T3
 3. **Iodine**, blocks the release of thyroid hormone
 4. **Dexamethasone**, prevents adrenal crisis, also inhibits peripheral conversion of T4 to T3

Myxedema Coma

- Most prevalent in elderly women and occurs most often in the winter months
- Symptoms
 - i. Hypothermia
 - ii. Confusion
 - iii. Hypotension/bradycardia
 - iv. Signs of hypothyroidism
- Treatment
 - IV thyroxine
 - 300 – 500mcg infused slowly, followed by 50 – 100mcg/day
 - Supportive measures

Adrenal Insufficiency

- Hypofunction of the adrenal cortex
 - Inadequate amounts of cortisol and aldosterone
- Sudden withdrawal of long-term steroid usage (most common)
- Symptoms
 - Fatigue
 - GI symptoms
 - Hyperpigmentation (mucous membrane involvement is pathognomonic)
- Crisis
 - Above with confusion, hypotension, tachycardia, fever
- Characteristic labs – Hyponatremia, hypoglycemia, hyperkalemia
- Treatment of crisis
 - D50, D5NS, Dexamethasone

Acid-Base – See additional packet – for exam, know how to calculate a basic acid-base question

Hypoglycemia

- Symptoms
 - Tremulousness, confusion
- Treatment
 - D50 (Children: 2-4ml/kg D25)
 - Oral carbohydrates – complex is better
 - IM glucagon if no IV, avoid in elderly and alcoholics

Diabetic Ketoacidosis

- Life-threatening complication of type 1 diabetes
- Symptoms
 - Polyuria/polydipsia
 - N/V
 - Dehydration
 - Kussmaul respirations – rapid deep breathing
- Diagnosis
 - ↑ serum/urine glucose
 - ↑ serum/urine ketones
 - AG acidosis
- Treatment
 - IV NS – add dextrose when BS 250 – 300
 - Low dose insulin – 0.1U/kg/hr
 - Early potassium replacement

Hyperosmolar hyperglycemic state

- NIDDM, no acidosis
- Symptoms
 - AMS – confusion → coma
 - Fatigue
 - Dehydration
- Diagnosis
 - Glucose > 400 (may be > 1000)
 - Serum osm > 320 mOsm/kg
 - Negative ketones
- Treatment – same as DKA

Alcoholic ketoacidosis

- Typically occurs 24-72 hours after a drinking binge followed by little or no food
- More common in chronic alcoholics
- Symptoms
 - N/V, abdominal pain
 - Dehydrated appearance
- Diagnosis
 - AG metabolic acidosis
 - Beta-hydroxybutyrate +, (acetone is neg)
- Treatment
 - Thiamine then D5NS
 - Potassium replacement