

# EmergencyKT: Thyroid Crisis

- Classic Symptoms**
- Severe thyroid crisis**
1. Tachycardia
  2. Fever
  3. Hypertension
  4. AMS
- Compensated Thyroid Crisis**
1. Weakness
  2. Weight loss
  3. Palpitations
- Supporting Signs & Symptoms**
1. Anxiety/Agitation/AMS/Paranoia
  2. Sweating
  3. Heat intolerance
  4. N/V/D
  5. Goiter
  6. Hyperactive reflexes
  7. Polydipsia
  8. Increased appetite

- Most Common Symptoms in patients younger than 50**
- Anorexia
  - Atrial fibrillation
  - Goiter
  - Autonomic Changes

- Most Common Symptoms in patients older than 50**
- Tachycardia
  - Fatigue
  - Anorexia
  - Weight loss

**Diagnosis of Thyroid Crisis Made**

- Consider Alternative Diagnoses**
- Hypoglycemia
  - Hypoxia
  - Sepsis
  - Heatstroke
  - Opioid withdrawal
  - Encephalitis/Meningitis
  - Tox (ETOH, Benzo, Barb)

**Labs/Evaluation**

- TSH, T3, Tot T4, Free T4
- Cardiac markers, BNP
- Other labs as indicated
- EKG, CXR

- Additional Treatment Considerations**
- IVF** -Treat empirically with IVF. Dehydration likely.
  - Fever** -- Acetaminophen (**Avoid ASA**)
  - High Output Failure** (Pulmonary edema and volume depletion)
    - Hold diuretics
    - Consider esmolol IV instead of propranolol
    - Consider cardiac U/S
    - Admit to ICU

**Initiate Treatment And Call for admission**

Tachycardia/HTN?

Yes

**Beta Blocker**

- Propranolol 60-80mg PO
- Repeat Q4-6hrs
- Titrate for HR and BP

No

Dexamethasone 2mg IV Q6hrs **AND**<sup>a</sup>

- PTU 600-1000mg PO then 200-300mg Q4-6hrs
- (PTU alternative: Methimazole<sup>b</sup> 20mg PO Q4-6hrs)

<sup>a</sup>If h/o thionamide toxicity i.e., agranulocytosis or hepatotoxicity, continue beta blockers and dexamethasone but consult endocrine for iodine

<sup>b</sup>Contraindicated in pregnancy. Use PTU if patient is pregnant

Prolonged ED Stay?

No

Admit

Yes

After 1-2 hours

**Iodine**<sup>c</sup>

- Lugol's Solution 6-8 drops Q6-8hrs
- OR**
- Potassium Iodide 5 drops PO Q6H

<sup>c</sup>If iodine allergic, use lithium carbonate 300mg PO Q6H

**References:**

\*Mills. et al. Emergency Medicine Practice. August 2009; 11(8).  
 Bahn et al. Thyroid. 2001; 21(6): 593-646 esp. pp 606-7.  
 Fitzpatrick & Russell. Obst Gyn Clin N Amer. 2010; 37: 173-93