Thyroid Disease

Identification of Thyroid Disease

Patients should be considered for evaluation for hyperthyroidism and hypothyroidism every 5 years as part of a physical or health maintenance visit.

Case Finding:

- Order TSH for patients with signs, symptoms, or other indications of hypo- or hyperthyroidism.
- Other indications, patients:
  - with autoimmune diseases (e.g. Type 1 diabetes mellitus, B12 deficiency, pernicious anemia, Addison's disease and collagen-vascular diseases)
  - with previous thyroid injury (exposure to radiation, excess iodine)
  - with previous thyroid surgery or thyroid function abnormality
  - when patient is undergoing treatment with interferon for hepatitis C perform baseline testing before treatment and every 3 months during treatment
  - when patient is undergoing treatment with amiodarone or lithium perform baseline testing before treatment and every 3 months during treatment

Testing:

- TSH is the best choice except in rare cases
- TSH + FT4 for patients with secondary diagnosis of thyroid disease and other CNS diseases, including brain injury

Refer to endocrinologist if results of tests confusing

Identification of Thyroid Disease for Pregnant Women and Those Planning Pregnancy:

- At initial interview, ask questions to identify potential thyroid problems and test as appropriate. Factors to be considered in case finding:
  - Those with autoimmune diseases often associated with thyroid disease, such as type 1 diabetes and pernicious anemia
  - Patients with a prior history of thyroid disease or thyroid surgery, an abnormal thyroid exam, or taking drugs known to affect the thyroid
  - Patients with a family history of thyroid illness or history of miscarriage
- When testing needed, first trimester, perform TSH and FT4
- This is necessary since in the first trimester HCG mimics TSH and leads to suppressed TSH even when patient euthyroid
- Second/third trimester perform TSH except when thyroid disease is secondary diagnosis (cause is hypothalamic or pituitary)

Treatment of Pregnant Women with Thyroid Disease

- Pregnant women who have hypothyroidism and those on thyroxine, test on regular basis (see above) during pregnancy, treat appropriately
- Thyroid nodules can and should be evaluated, follow up as necessary with obstetrician/gynecologist, surgeon & endocrinologist working together
- Imaging (ultrasound) may be ordered, as indicated, **radioisotope studies should not be done**

Hypothyroidism

Hypothyroidism is a syndrome that results from inadequate levels of thyroid hormone (T-4 and/or T-3). It is manifested by a set of symptoms, physical findings and laboratory tests.

See pages 3-5 for algorithms on diagnosis and treatment of hypothyroidism and hyperthyroidism and thyroid nodule

Key Points about Hypothyroidism

- Signs and symptoms of hypothyroidism: decrease in metabolic rate, tiredness, lethargy, sensitivity to cold, menstrual disturbances, goiter, hyperlipidemia
- **For most patients, TSH is the test of choice** for screening and monitoring of hypothyroidism
- Numerous drugs/diseases can alter T4 & T3 levels
- TSH is *not* the test of choice for those with pituitary disease, brain injury or in first trimester of pregnancy
- What is normal TSH (within the reference range) depends largely on individual

Key Points about Hyperthyroidism

- TSH the best diagnostic test for hyperthyroidism
- Asymptomatic patients over age 50 with suppressed TSH (less than 0.1) at risk for atrial fibrillation
- Confirmation of elevated FT4 and/or FT3 required after screening with a TSH
- Workup should include iodine uptake and scan to define etiology of hyperthyroidism
- Review treatment options with patient and family

Key Points about Thyroid Nodule (TN) Evaluation

- Rule of FIVE: 5% of your overall patient population will have palpable TNs, 5% of all palpable TNs are malignant
- Rule of ACTIVITY: Most nodules that are hyperactive are benign (extremely rare exceptions)

Refer to Endocrinologist

- RISK FACTORS for malignancy:
  - A PALPABLE nodule
  - Age < 20 or >60
  - M>F
  - History of radiation exposure
  - Familial history of thyroid cancer
  - Progressive growth on oral T-4
- Ultrasound characteristics of TN causing concern:
  - Microcalcifications
  - Hypoechogenicity
  - Intranodule vascularity
  - Irregular nodule margins
  - Nodule > 10mm
- There is no strong evidence that treatment of euthyroid patients with thyroid hormone will shrink benign thyroid nodules.
- Evaluate further if patient has normal or elevated TSH
- Evaluate all palpable nodules

See endocrinologist for any nodule with above risk factors or concerning

Guidelines are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs.