XXXVII. THYROID SCREENING IN PREGNANCY

A. The American Thyroid Association Guidelines recommends that the following women have screening for thyroid disease with a TSH:
   1. A history of hypothyroidism/hyperthyroidism or current symptoms/signs of thyroid dysfunction
   2. Known thyroid antibody positivity or presence of a goiter
   3. Age > 30 years
   4. Type 1 diabetes or other autoimmune disorders
   5. History of pregnancy loss, preterm delivery, or infertility
   6. History of head or neck radiation or prior thyroid surgery
   7. Family history of autoimmune thyroid disease or thyroid dysfunction
   8. Morbid obesity (BMI > 40)
   9. Use of amiodarone or lithium, or recent administration of iodinated radiologic contrast
   10. Residing in an area of known moderate to severe iodine insufficiency

XXXVIII. HYPERTHYROIDISM IN PREGNANCY

Please consult with the MCH consultants and endocrinology for management of women with hyperthyroidism. All women with Graves should be on co-follow.

A. Diagnosis
   1. A TSH can be physiologically suppressed to as low as 0.03 or even undetectable in in pregnancy and be normal.
   2. If TSH is found to be low, check a TT4 or FT4 and T3.
   3. If the TSH is suppressed and the TT4, FT4, or T3 is elevated, the differential diagnosis is usually between Graves' and gestational transient thyrotoxicosis.
      a. If no prior h/o thyroid disease and no goiter or endocrine ophthalmopathy, gestation transient thyrotoxicosis is more likely
   4. A thyroid stimulating immunoglobulin (TSI) test and a TT3 can help distinguish the diagnosis. If positive, then diagnosis is Graves.

B. Treatment - copied from the American Thyroid Association Guidelines See their Guidelines for more details.
   1. For a newly pregnant women with euthyroid Graves on low dose of MMI (≤ 5–10 mg/d) or PTU (≤ 100–200 mg/d), you should consider discontinuing all antithyroid medication given potential teratogenic effects.
      a. The decision to stop medication should consider the disease history, goiter size, duration of therapy, results of recent thyroid function tests, TRAb measurement, and other clinical factors.
      b. Following cessation of antithyroid medication, maternal thyroid function testing (TSH, and FT4 or TT4) and clinical examination should be performed every 1–2 weeks to assess maternal and fetal thyroid status. If the pregnant woman

remains clinically and biochemically euthyroid, test intervals may be extended to 2–4 weeks during the second and third trimester

c. At each assessment, the decision to continue conservative management (withholding antithyroid medication) should be guided both by the clinical and the biochemical assessment of maternal thyroid status.

2. High risk women: In pregnant women with a high risk of developing thyrotoxicosis if antithyroid drugs were to be discontinued, continued antithyroid medication may be necessary. Factors predicting high clinical risk include being currently hyperthyroid, or requirement of > 5–10 mg/d MMI or > 100–200 mg/d PTU to maintain a euthyroid state. In such cases
   a. PTU is recommended for the treatment of maternal hyperthyroidism through 16 weeks of pregnancy.
   b. Pregnant women receiving MMI in need continuing therapy during pregnancy should be switched to PTU as early as possible
   c. When shifting from MMI to PTU, a dose ratio of approximately 1:20 should be used (e.g., MMI 5 mg/d = PTU 50 mg twice daily).
   d. If ATD therapy is required after 16 weeks' gestation, it remains unclear whether PTU should be continued or therapy changed to MMI. As both medications are associated with potential adverse effects and shifting potentially may lead to a period of less-tight control, no recommendation regarding switching antithyroid drug medication can be made at this time.

C. Monitoring:
   1. In women being treated with ATDs in pregnancy, FT4/TT4 and TSH should be monitored approximately every 4 weeks
   2. Antithyroid medication during pregnancy should be administered at the lowest effective dose of MMI or PTU, targeting maternal serum FT4/TT4 at the upper limit or moderately above the reference range.
   3. If the patient has a past history of GD treated with ablation (radioiodine or surgery), a maternal TSI is recommended at initial thyroid function testing during early pregnancy.
   4. If maternal TSI concentration is elevated in early pregnancy, repeat testing should occur at weeks 18–22.
   5. If maternal TSI is undetectable or low in early pregnancy, no further TSI testing is needed.
   6. If a patient is taking ATDs for treatment of Graves' hyperthyroidism when pregnancy is confirmed, a maternal serum determination of TSI is recommended.
   7. If the patient requires treatment with ATDs for GD through mid-pregnancy, a repeat determination of TSI is again recommended at weeks 18–22.

8. If elevated TSI is detected at weeks 18–22 or the mother is taking ATD in the third trimester, a TSI measurement should again be performed in late pregnancy (weeks 30–34) to evaluate the need for neonatal and postnatal monitoring.

D. Fetal Surveillance:
   1. Fetal surveillance should be performed in women who have uncontrolled hyperthyroidism in the second half of pregnancy, and in women with high TSI levels detected at any time during pregnancy. A consultation with a UNM fellowship trained FMOB physician or maternal–fetal medicine specialist is recommended. Monitoring may include ultrasound to assess heart rate, growth, amniotic fluid volume, and the presence of fetal goiter.

E. Delivery: Test umbilical cord blood at birth for TRAb by collected cord blood in green top tube to help determine risk of neonatal graves. TRAB is done at birth rather than TSI as we receive results several days sooner. See Neonatal Graves article on wiki.
Please see the American Thyroid Association Guidelines or Endocrine Society Guidelines for more information

XXXIX. HYPOTHYROIDISM IN PREGNANCY

A. Confirm that the reason for hypothyroidism is not due to a history of Graves and is from Hashimoto's. Women with a history of Graves will need a TSI checked to determine risk of Neonatal Graves.
B. Women planning pregnancy should have a goal TSH of < 2.5.
C. Diagnosis in pregnancy: See chart below
   1. Pregnant women with TSH > 2.5-10 should be evaluated with TPOAb (Thyroid Peroxidase Antibody Status).
   2. Use ~ 4.0 for upper limit of normal
   3. If TSH > 10 start levothyroxine
   4. If TSH < 10, review chart below to help with treatment determination.
D. Treatment: Target TSH to < 2.5 or half trimester-specific range.
   1. As soon as she becomes pregnant, increase levothyroxine by 25-30%. One option is to increase levothyroxine from 7 tabs a week (1 po q day) to 9 tabs a week.
   2. Use levothyroxine for treatment. *Do not use other preparations such as T3 or desiccated thyroid (Armour thyroid).*
   3. Check TSH at least once between 26 and 32 weeks
   4. Women with hypothyroidism or at risk for hypothyroidism should be monitored with serum TSH every 4 weeks until mid-gestation, when dosage changes have been made, and at least once near 30 weeks.
   5. Reduce levothyroxine dose to pre-pregnancy dose postpartum and re-check TSH in 6 weeks.

6. No other maternal of fetal thyroid testing is needed such at serial fetal US, antenatal testing,
7. Please see the American Thyroid Association Guidelines 2017 or Endocrine Society Guidelines for more information
8. Call MCH back-up for questions. Residents should discuss with MCH faculty prior to initiating treatment.

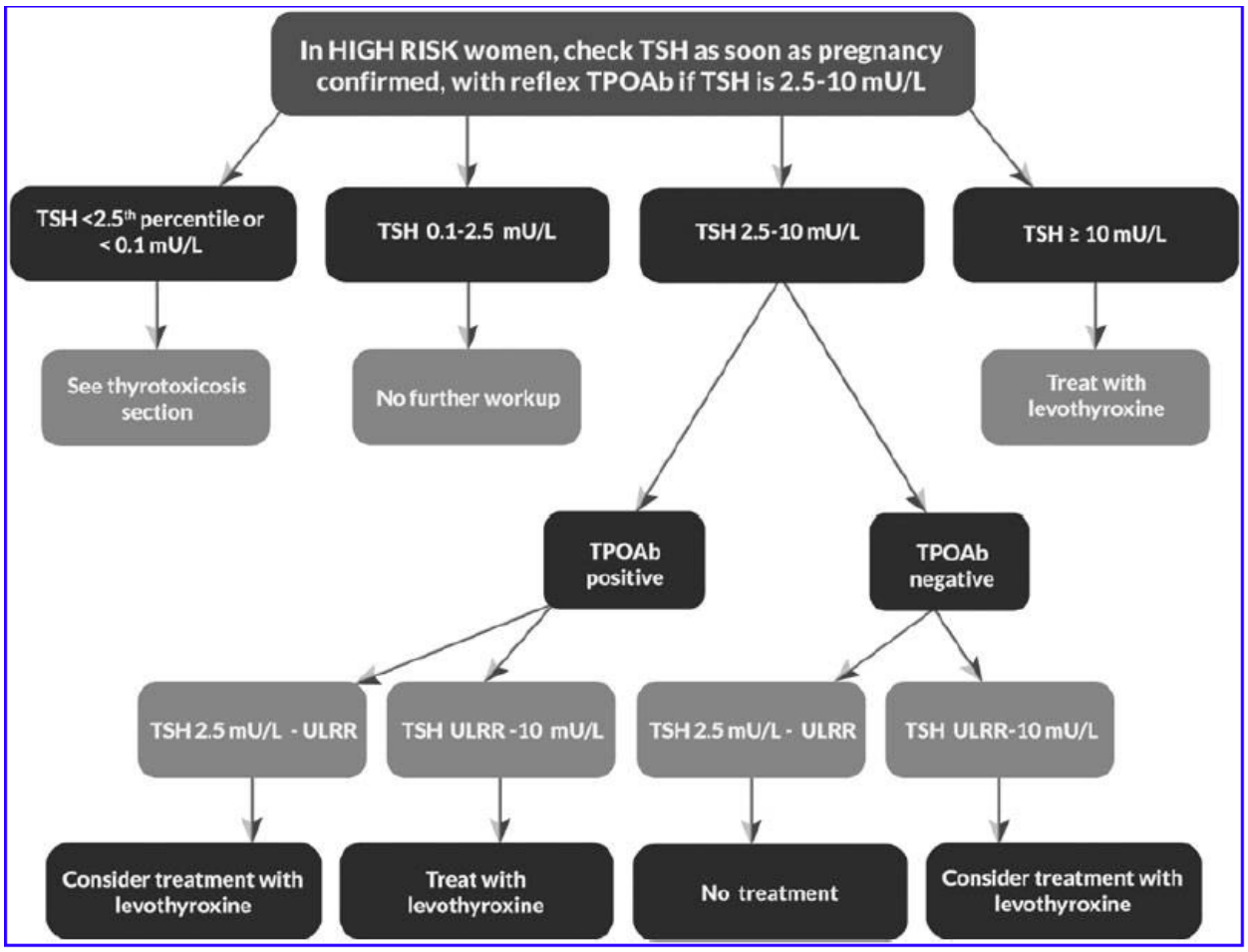

FIG. 1. Testing for thyroid dysfunction in pregnancy. ULRR, upper limit of the reference range.

From the 2017 Guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease During Pregnancy and the Postpartum

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