UNC SCHOOL OF MEDICINE

UNC Center for Maternal & Infant Health

Fetal Thyroid Disease

References

1. Kilpatrick S. Umbilical blood sampling in women with thyroid disease in pregnancy: Is it necessary? **Am J Obstet Gynecol 2003;189:1-2.** *TSAb should be done on women with history of treatment with* ^{131}I *or with a previously affected neonate. PUBS should be offered to pregnant women with Graves' disease if any one of the following are present: a) a history of a prior affected baby, b) a history of maternal* ^{131}I *treatment and a high TSAb level (>5IU or >160%), c) the fetus displays fetal tachycardia, growth restriction, fetal goiter, hydrops or cardiomegaly.*

2. Millar LK, Wing DA, Leung AS, Kooings PP, Montoro MN, Mestman JH. Low birth weight and preeclampsia in pregnancies complicated by hyperthyroidism. **Obstet Gynecol 1984;84:946-9.** *Odds ratio for low birth weight (<2500g) is elevated in patients in patients who were hyperthyroid on presentation but became controlled during pregnancy OR 2.4 [1.4-4.1] and in women whose hyperthyroidism was not controlled OR 9.2 [5.5-16].*

3. Davis LE, Lucas MJ, Hankins GDV, Roark ML, Cunningham FG. Thyrotoxicosis complicating pregnancy. **Am J Obstet Gynecol 1989;160:63-70.** *Retrospective review of 60 pregnancies complicated by thyrotoxicosis showed 6 stillbirths and 1 mid-pregnancy loss; all in women in whom clinical euthyroidism was not achieved. Two were treated but had persistent thyrotoxicosis and 5 were not treated..*

4. Nachum Z, Rakover Y, Weiner E, Shalev E. Graves disease in pregnancy: Prospective evaluation of a selective invasive treatment protocol. **Am J Obstet Gynecol 2003;189:159-65.** *This protocol for treatment of fetal thyroid disease has shown success for both reversing fetal goiter and assuring delivery of a euthyroid infant. The presence of normal fetal heart rate and normal ultrasound findings cannot exclude abnormal fetal thyroid function. IUGR is a late manifestation of sustained fetal thyrotoxicosis.*

5. Mandel SJ, Cooper DS. The use of antithyroid drugs in pregnancy and lactation. **J Clin Endocrinol Metab 2001;86:2354-9.** *When Graves hyperthyroidism occurs or recurs during pregnancy, an antithyroid drug should be given in the lowest dose necessary to maintain the woman's serum free thyroxine concentration in the upper part of the normal reference range or just above this range.*

6. Stagnaro-Green A, Abalovich M, Alexander E, et al. Guidelines of the American Thyroid Association for the Diagnosis and Management of Thyroid Disease During Pregnancy and Postpartum. **Thyroid 2011;21:1061-1124**. *The recommendations of this committee include: Obtain TRAb at 20-24 weeks EGA with past or current history of Graves disease, with 3 x upper limit of normal being elevated. Serial US surveillance (heart rate, growth, AFI, assessment for*

fetal goiter) should be performed in women with uncontrolled hyperthyroidism or elevated TRAb levels. Cordocentesis is reserved for use in determining thyroid function status in presence of fetal goiter. MMI (dose up to 20-30 mg/d) and PTU (up to 300mg/d) as second line agent due to potential for hepatoxicity, are compatible with breastfeeding (take following a feeding and use in divided doses).

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Notification to Users

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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