Management of Thyroid Disease in Pregnancy

This department covers selected points from the 2007 Endocrine Update: A CME Day from the Division of Endocrinology and Metabolism at McMaster University and the University of Western Ontario.
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During pregnancy, there is a slight increase in the concentration of free T4 and T3 during the first trimester, while TSH concentrations are slightly reduced. Transient subclinical hyperthyroidism occurs in 10% to 20% of normal pregnant women.

Overt hypothyroidism diagnosed during pregnancy is quite rare (3/1,000). It often occurs in women who are anovulatory and have a high rate of first trimester miscarriage. These women are also at increased risk of several conditions including:

- pre-eclampsia,
- hypertension,
- placental abrution and
- preterm delivery.

A number of studies have also demonstrated neuropsychological impairments in children born to women with subclinical (not overt) hypothyroidism. In hypothyroid women, it is recommended to increase the dose of thyroid hormone by 30% as soon as pregnancy is confirmed. Depending on follow-up TSH levels, an increase of up to 50% may be needed.

Hyperthyroidism occurs in about 2/1,000 pregnant women and usually becomes less severe during the later stages of pregnancy. If left uncontrolled, hyperthyroidism can increase the risk of:

- spontaneous abortion,
- premature labour,
- low birth weight,
- pre-eclampsia and
- maternal heart failure.

The goal of treatment for hyperthyroidism during pregnancy is to maintain the mother's serum free T4 concentration in the high-normal range using the lowest drug dose. Effective treatment agents include ß-blockers and thionamides.

It is also important to monitor thyroid peroxidase antibodies during pregnancy, as a high serum level of these antibodies may be associated with increased risk of miscarriage. Lastly, it is appropriate to complete a fine needle aspiration in suspected thyroid nodules. Benign nodules should be followed, while cancerous nodules can be removed through surgery in the second trimester of postpartum. Dx

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