THYROID AND PREGNANCY

Initiation of levothyroxine therapy for subclinical hypothyroidism during pregnancy in the United States.

BACKGROUND
Subclinical hypothyroidism is felt to be an early, mild form of hypothyroidism that is diagnosed when blood tests show that thyroid stimulating hormone (TSH) concentration is high but the free thyroxine (T4) level is still normal. Most people with subclinical hypothyroidism do not have any symptoms, have a TSH level below 10 mU/L and generally do not need treatment with levothyroxine. However, during pregnancy the benefit of using levothyroxine to treat subclinical hypothyroidism is more controversial. Some but not all studies show that treating subclinical hypothyroidism in pregnancy, particularly when anti-thyroid peroxidase antibody levels are positive and particularly when TSH level is above 4 mU/L may reduce the risk of miscarriage. As a result, some clinical practice guidelines recommend treating subclinical hypothyroidism with levothyroxine, although there is still no definitive agreement among all the professional societies.

The current study examines the prescribing practices for pregnant women with subclinical hypothyroidism to determine the factors that influence who is and who is not given levothyroxine for subclinical hypothyroidism during pregnancy.

THE FULL ARTICLE TITLE

SUMMARY OF THE STUDY
The authors examined a large US medical claims database and identified 7990 pregnant women who were diagnosed with subclinical hypothyroidism between January 2010 and December 2014. They found that only 1214 (15.2%) received treatment with levothyroxine. Treatment was more likely in women who a) had higher TSH levels, b) were obese, c) had recurrent miscarriages, d) had thyroid disease before their pregnancy and e) were cared for by an endocrinologist as opposed to a gynecologist or primary care physician. Moreover, endocrinologists started levothyroxine at lower TSH levels than other specialties.

Women who lived in the Northeast and Western US were more likely to receive levothyroxine treatment compared with other regions. Asian women were more likely, whereas Hispanic women were less likely to receive levothyroxine when compared to white women. Finally, the proportion of women treated with levothyroxine increased over time; levothyroxine treatment was twice as likely in 2014 as in 2010, perhaps because in 2012 the Endocrine Society Published guidelines recommending levothyroxine treatment for all pregnant women with subclinical hypothyroidism.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?
There is large variation in the treatment practices for subclinical hypothyroidism during pregnancy among endocrinologists, gynecologists and primary care physicians, especially when the TSH is only mildly elevated. Patient characteristics and geographic location also influence the likelihood of levothyroxine therapy and, taken together, these findings suggest ongoing disparities in health access and quality which merits further research.

— Philip Segal, MD

ATA THYROID BROCHURE LINKS
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ABBREVIATIONS & DEFINITIONS

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

TPO antibodies: these are antibodies that attack the thyroid instead of bacteria and viruses, they are a marker for autoimmune thyroid disease, which is the main underlying cause for hypothyroidism and hyperthyroidism in the United States.

TSH: thyroid stimulating hormone — produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

Thyroxine (T₄): the major hormone produced by the thyroid gland. T₄ gets converted to the active hormone T₃ in various tissues in the body.

Miscarriage: this occurs when a baby dies in the first few months of a pregnancy, usually before 22 weeks of pregnancy.

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