



THYROID AND PREGNANCY

Hypothyroid symptoms in pregnant women fail to predict hypothyroid status

BACKGROUND

Women with untreated hypothyroidism during pregnancy are at risk of having a miscarriage and of experiencing other complications such as premature birth and low birth weight babies. In addition, decreased availability of thyroid hormone from hypothyroidism in the mother may delay brain development in the fetus. Since treatment with levothyroxine can prevent many of these complications, it is important to identify women who have hypothyroidism (or are at high risk of developing hypothyroidism) early during a pregnancy so that treatment can be initiated. One way to accomplish this would be to simply test all women seeking pregnancy or who are newly pregnant for hypothyroidism with a serum TSH level; a high TSH level (along with a low free T₄ level) would indicate overt hypothyroidism and identify women at the highest risk of having problems during pregnancy. However, universal screening is very controversial and most guidelines, including the those published by the American Thyroid Association, support an approach of aggressive case-finding using specific criteria to identify and subsequently test only those women who are truly at risk of hypothyroidism.

One of the case-finding criteria that may lead to further testing is whether a pregnant woman has current symptoms or signs of hypothyroidism. However, symptoms of hypothyroidism such as fatigue, weight gain and constipation are very common and may be the result of pregnancy itself, as opposed to from true hypothyroidism. Consequently, the following study was designed to determine the association between TSH levels and symptoms of hypothyroidism in women during early pregnancy.

THE FULL ARTICLE TITLE

Pop VJ et al. Thyroid disease symptoms during early pregnancy do not identify women with thyroid hypofunction that should be treated. *Clin Endocrinol (Oxf)*. July 26, 2017 [Epub ahead of print].

SUMMARY OF THE STUDY

The investigators administered a questionnaire at the first 12-week appointment of 2198 pregnant women in the Netherlands who did not have a history of thyroid dysfunction, autoimmune disease, twin or in-vitro fertilization pregnancy and who were not taking medications that interfere with thyroid function. The questionnaire used a 5 point scale to assess for the presence of symptoms typical of hypothyroidism. Participants also had blood tests for serum TSH, Free T₄ and thyroid peroxidase (TPO) antibody levels measured around the same time. The authors defined “treatment requiring hypothyroidism” as those with high TSH and low free T₄ level (called overt hypothyroidism) as well as those with normal T₄ but a TSH level over 10mIU/L (called subclinical hypothyroidism). They then compared those who reported high scores based on the questionnaire with those who had treatment requiring hypothyroidism based on the blood tests

A total of 302 women reported high symptom scores for hypothyroidism based on the questionnaire and 15 women (0.7% of entire group) had treatment requiring hypothyroidism based on blood tests. Only 1 of the 302 women with a high symptom score was actually found to have treatment requiring hypothyroidism. As such high symptom scores for hypothyroidism did not predict true hypothyroidism based on blood tests.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that symptoms alone, in the absence of laboratory tests, do not predict hypothyroidism in pregnant women. Many of the symptoms of hypothyroidism overlap with the symptoms of pregnancy and, as such, clinicians must evaluate for other risk factors of hypothyroidism in order to identify pregnant women who should receive screening blood tests.

— Philip Segal, MD





THYROID AND PREGNANCY, continued

ATA THYROID BROCHURE LINKS

Thyroid Disease and Pregnancy: <https://www.thyroid.org/thyroid-disease-pregnancy/>

Hypothyroidism (Underactive): <https://www.thyroid.org/hypothyroidism/>

Thyroid Function Tests: <https://www.thyroid.org/thyroid-function-tests/>

ABBREVIATIONS & DEFINITIONS

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

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

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.

Levothyroxine (T4): the major hormone produced by the thyroid gland and available in pill form as Synthroid™, Levoxyl™, Tyrosint™ and generic preparations.

