



THYROID AND PREGNANCY

Diagnosing mild thyroid problems in early pregnancy and defining its impact on complications of pregnancy needs to be revisited

BACKGROUND

Thyroid hormone is essential for the normal growth and development of the baby during pregnancy. Hypothyroidism in the mother during early pregnancy is associated with adverse outcomes, but not consistently across studies. Many studies show that screening for thyroid disease during pregnancy does identify a lot of mild thyroid problems, mainly mild hypothyroidism. While it is clear that severe hypothyroidism in the mother results in complications in the baby, it is much less certain that mild hypothyroidism has significant effects on the baby. Further, it is completely unclear whether treating mild hypothyroidism in the mother has any effect in preventing any adverse outcomes. This study examined whether adding serum thyroid-function tests to the routine screening for chromosomal abnormalities between 9 and 14 weeks of pregnancy predicts adverse pregnancy outcomes.

THE FULL ARTICLE TITLE

Ong GS et al. Does the thyroid-stimulating hormone measured concurrently with first trimester biochemical screening tests predict adverse pregnancy outcomes occurring after 20 weeks gestation? *J Clin Endocr Metab* 2014;99:E:2663-72.

SUMMARY OF THE STUDY

A group of 2411 women in Western Australia with pregnancies with a single baby were studied. The investigators evaluated the association between TSH and FT₄ and a variety of adverse pregnancy events.

A TSH >2.15 mU/L in the first trimester (97.5th percentile)

was found in 133 women (5.5%), including 22 (1%) with TSH >4 mU/L and 5 (0.2%) >10 mU/L. Adverse pregnancy outcomes occurred in 327 women (15%). TSH and FT₄ did not differ significantly between women with or without adverse pregnancy events. The mother's TSH >2.15 mU/L was not a predictor of adverse pregnancy outcomes.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that screening for TSH as part of first-trimester screening does not predict adverse pregnancy outcomes. However, a major limitation of this study is that no information was provided as to any medications that the mothers may have been on during the pregnancy. Specifically, it is not known whether any mothers were already on thyroid hormone, either before or after the screening took place. In fact, the relatively low rate of elevated TSH levels suggests that some of these mothers were indeed treated with thyroid hormone. In any event, despite many studies in this area, no clear conclusions can be made on the role of screening for or treating mild thyroid dysfunction in the mother during pregnancy.

— Alan P. Farwell, MD

ATA THYROID BROCHURE LINKS

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

Thyroid Function Tests: <http://www.thyroid.org/blood-test-for-thyroid>

Hypothyroidism: <http://www.thyroid.org/what-is-hypothyroidism>

ABBREVIATIONS & DEFINITIONS

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.

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