



THYROID AND PREGNANCY

Thyroid Autoimmunity and Pregnancy

BACKGROUND

Autoimmune disorders of the thyroid, characterized by positive thyroid antibodies, are very common, especially in women of child-bearing age. Autoimmune thyroiditis (Hashimoto's thyroiditis) is the most common cause of hypothyroidism in the United States and hypothyroidism during pregnancy may be associated with problems, including miscarriage. Even women with normal thyroid function but positive thyroid antibodies are at increased risk of having a miscarriage. The goal of this study was to evaluate all of the studies that have been performed to investigate whether positive thyroid antibodies are associated with an increased risk of miscarriage in women with normal thyroid function.

THE FULL ARTICLE TITLE

Chen L, Hu R. Thyroid autoimmunity and miscarriage: a meta-analysis. *Clin Endocrinol (Oxf)* 2011;74:513-9.

SUMMARY OF THE STUDY

This study was a meta-analysis designed to examine whether positive thyroid antibodies are associated with an increased risk of miscarriage in women with normal thyroid function. A meta-analysis is a type of study that statistically analyzes a

group of separate individual studies. In this particular meta-analysis, 22 studies of positive thyroid antibodies in women were included. This study suggested that women with normal thyroid function and positive thyroid antibodies had a greater than 2-fold increased risk of miscarriage than women with negative thyroid antibodies.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This meta-analysis confirms that women with positive thyroid antibodies have an increased risk of miscarriage, even if their thyroid function is normal. What is not known is whether any intervention, such as treating with thyroid hormone, would have any effect on decreasing the risk of miscarriage. These studies are now in progress.

— Whitney Woodmansee, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism: http://thyroid.org/patients/patient_brochures/hypothyroidism.html

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

Thyroid Function Tests: http://thyroid.org/patients/patient_brochures/function_tests.html

ABBREVIATIONS & DEFINITIONS

Autoimmune disorders: a diverse group of disorders that are caused by antibodies that get confused and attack the body's own tissues. The disorder depends on what tissue the antibodies attack. Graves' disease and Hashimoto's thyroiditis are examples of autoimmune thyroid disease. Other Autoimmune disorders include: type 1 diabetes mellitus, Addison's disease (adrenal insufficiency), vitiligo (loss of pigment of some areas of the skin), systemic lupus erythematosus, pernicious anemia (B12 deficiency), celiac disease, inflammatory bowel disease, myasthenia gravis, multiple sclerosis and rheumatoid arthritis.

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

Hashimoto's thyroiditis: the most common cause of hypothyroidism in the United States. It is caused by antibodies that attack the thyroid and destroy the gland.

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

Antibodies: proteins that are produced by the body's immune cells that attack and destroy bacteria and viruses that cause infections. Occasionally the antibodies get confused and attack the body's own tissues, causing autoimmune disease.

Thyroid antibodies: this term refers to a group of antibodies that some people make that can attack the thyroid. Anti-thyroid antibodies is another term that is often used interchangeably. This general term often includes the following specific thyroid antibodies: anti-thyroid peroxidase (TPO Ab), anti-thyroglobulin, thyroid microsomal and thyroid stimulating antibodies.