



AUTOIMMUNE THYROID DISEASE

Patients with autoimmune thyroid disease have an increased risk for other autoimmune diseases

WHAT IS THE STUDY ABOUT?

The most common forms of autoimmune thyroid disease are Hashimoto's thyroiditis and Graves' disease. Hashimoto's thyroiditis (also known as chronic thyroiditis) may lead to hypothyroidism, while Graves' disease is usually associated with hyperthyroidism. Both of these disorders may be associated with other autoimmune problems including Type 1 diabetes mellitus, Addison's disease (adrenal insufficiency), vitiligo (loss of pigment of some areas of the skin), systemic lupus erythematosus, pernicious anemia, celiac disease, inflammatory bowel disease, myasthenia gravis, multiple sclerosis and rheumatoid arthritis. The present study examined a large number of patients with autoimmune thyroid disease in order to determine the risk for other autoimmune disorders and the factors which are associated with the risk for and the type of other autoimmune problems.

THE FULL ARTICLE TITLE:

Boelaert et al. Prevalence and relative risk of other autoimmune diseases in subjects with autoimmune thyroid disease. *Am J Med* 2010;123:183.e1-9.

WHAT WAS THE AIM OF THE STUDY?

The aim of this study is to determine the risk for other autoimmune disorders in patients with autoimmune thyroid disease.

WHO WAS STUDIED?

A total of 3286 individuals with autoimmune thyroid disease were recruited from an ongoing study in England on autoimmune thyroid disease. In this group, 85% had Graves' disease and 15% had Hashimoto's thyroiditis.

HOW WAS THE STUDY DONE?

Patients who stated that they had autoimmune thyroid disease filled out a questionnaire and had their medical records and medications reviewed by a physician. The type of underlying autoimmune thyroid disease was recorded, as well as gender, age and parents' history of hyperthyroidism or hypothyroidism and any associated autoimmune disorders.

WHAT WERE THE RESULTS OF THE STUDY?

About 10% of patients with Graves' disease and 14% with Hashimoto's thyroiditis had another autoimmune disorder. The most common associated autoimmune disorder for both conditions was rheumatoid arthritis. Patients with Hashimoto's thyroiditis had a 10-fold higher risk for Addison's disease and a 3-fold increased risk for pernicious anemia compared to Graves' disease. Men with Graves' disease had higher rates of Type 1 diabetes and myasthenia gravis compared to women, while women, but not men, with Graves' disease had an increased risk for Addison's disease, celiac disease and multiple sclerosis. A total of 17.5% of mothers of patients with Graves' disease and 23.6% of mothers with children with Hashimoto's thyroiditis had a history of thyroid dysfunction. In contrast, 3.1% and 5.7% of the fathers of patients with either Graves' disease or Hashimoto's thyroiditis, respectively, had thyroid dysfunction. Graves' disease and Hashimoto's thyroiditis were more common in the parents of patients with autoimmune thyroid disease than in the regular UK population. Parents of patients with Hashimoto's thyroiditis also had an increased prevalence of inflammatory bowel disease.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Several other studies have found an association between autoimmune thyroid disease and other autoimmune diseases. This study with more than 3000 patients is the largest study to examine the relationship and quantify the risk.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Other autoimmune disorders should be considered in patients with autoimmune thyroid disease who develop new or nonspecific symptoms. Also, there should be additional genetic research studies to try and locate a gene or genes that make a patient susceptible for multiple autoimmune disorders.

— Glen Braunstein, MD

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AUTOIMMUNE THYROID DISEASE, continued

ATA THYROID BROCHURE LINKS

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

Graves disease: http://thyroid.org/patients/patient_brochures/graves.html

Thyroiditis: http://thyroid.org/patients/patient_brochures/thyroiditis.html

ABBREVIATIONS & DEFINITIONS

Graves' disease — the most common cause of hyperthyroidism in the United States. It is caused by antibodies that attack the thyroid and turn it on.

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.

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.

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.