



## HYPOTHYROIDISM

# Thyroid-associated eye disease occurs in 6% of patients with Hashimoto's Thyroiditis

### BACKGROUND

Autoimmune thyroid diseases comprise two main clinical presentations: Graves' disease (hyperthyroidism) and Hashimoto's thyroiditis (hypothyroidism), both characterized by antibodies that attack the thyroid. Indeed, these disorders are the opposite ends of the same underlying cause. Thyroid-associated eye disease is more common in patients with Graves' disease and may affect ~25% of these patients. However, patients with Hashimoto's may also be affected by thyroid-associated eye disease. This study examined the types of antibodies that are seen in Graves' disease and Hashimoto's thyroiditis, what antibodies are associated with thyroid-associated eye disease and how common is thyroid-associated eye disease in patients with Hashimoto's thyroiditis.

### THE FULL ARTICLE TITLE

Kahaly GJ et al Thyroid stimulating antibodies are highly prevalent in Hashimoto's thyroiditis and associated orbitopathy. *J Clin Endocrinol Metab.* March 10, 2016 [Epub ahead of print].

### SUMMARY OF THE STUDY

The records of 700 consecutive patients followed at the endocrine outpatient clinic and at the joint thyroid-eye clinic of the Johannes Gutenberg University Medical Center in Mainz, Germany with a diagnosis of Hashimoto's thyroiditis were reviewed. All patients were screened for thyroid-associated eye disease, which was classified as clinically active or inactive, and as mild, moderate-to-severe, or sight-threatening. For comparison, a group of 53 patients with Graves' disease (26 without and 27 with eye disease) and 302 healthy control subjects were also included in this study.

Thyroid-associated eye disease was present in 44 (6%) of the 700 patients with Hashimoto's thyroiditis. Compared to the patients without thyroid-associated eye disease, those with thyroid-associated eye disease tended to be older (49.3 yr vs. 35.2 yr); have a longer duration of

Hashimoto's thyroiditis (2.4 yr vs. 0.9 yr), were heavier smokers, and were less likely to present with another associated autoimmune disease (only thyroid disease: 75% vs. 52.6%; associated type 1 diabetes, 2.3% vs. 16.3%). Thyroid-associated eye disease was mild and inactive in two thirds of the patients. Eye disease activity/severity was independent of sex, age, thyroid function, and smoking. No differences were noted in the prevalence of hypothyroidism or rate of levothyroxine replacement.

TSAb was positive in 5.5% in the patients with Hashimoto's and thyroid-associated eye disease and 68.2% in those with Hashimoto's but not eye disease. However, the levels of TSAb were higher in the patients with Hashimoto's and thyroid-associated eye disease.

### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study reports that the prevalence of thyroid-associated eye disease was 6%. In 2/3 of the 44 cases, the eye disease was inactive (i.e., noninflammatory) and mild (not requiring glucocorticoid or radiation therapy). Patients with Hashimotos thyroiditis and thyroid-associated eye disease were somewhat older, had Hashimotos for a longer time, were less likely to have another associated autoimmune disease, had higher levels of TSAb and were more likely to be smokers. The study confirms the link of thyroid-associated eye disease with TSAb, the levels of which are strongly correlated with the occurrence and activity/severity of thyroid-associated eye disease.

— Alan P. Farwell, ND, FACE

### ATA THYROID BROCHURE LINKS

Hyperthyroidism: <http://www.thyroid.org/hyperthyroidism/>

Hypothyroidism: <http://www.thyroid.org/hypothyroidism/>

Graves' Disease: <http://www.thyroid.org/graves-disease/>

**HYPOTHYROIDISM, continued****ABBREVIATIONS & DEFINITIONS**

**Autoimmune thyroid disease:** a group of disorders that are caused by antibodies that get confused and attack the thyroid. These antibodies can either turn on the thyroid (Graves' disease, hyperthyroidism) or turn it off (Hashimoto's thyroiditis, hypothyroidism).

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

**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.

**Thyroid eye disease (TED):** also known as Graves ophthalmopathy. TED is most often seen in patients with Graves' disease but also can be seen with Hashimoto's thyroiditis. TED includes inflammation of the eyes, eye muscles and the surrounding tissues. Symptoms include dry eyes, red eyes, bulging of the eyes and double vision.



September 21-25, 2016

# 86<sup>th</sup> Annual Meeting of the American Thyroid Association

DENVER, COLORADO  
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