



THYROID CANCER

Thyroid nodules in patients with autoimmune thyroid disease should be evaluated for thyroid cancer

BACKGROUND

Autoimmune thyroid disease is caused by your body making antibodies that attack the thyroid and cause it to be hypothyroid (Hashimoto's thyroiditis) or hyperthyroid (Graves' disease). Autoimmune thyroid disease occurs in 10-12% of the population, although over half of those affected have normal thyroid function. Thyroid cancer is the fastest rising cancer in women. Prior studies have shown that autoimmune thyroid disease and thyroid cancer may occur at the same time. Indeed, patients with autoimmune thyroid disease frequently have enlarged thyroids with nodules found on ultrasound. Scientists have found common genes activated in both conditions. Some studies suggest that inflammation caused by the antibodies in autoimmune thyroid disease may increase the likelihood of thyroid cancer. Another explanation is that the antibodies may stimulate thyroid cancer growth. Other studies suggest these antibodies may actually prevent the development of thyroid cancer. The purpose of this study was to determine the risk of thyroid cancer in patients with autoimmune thyroid diseases.

THE FULL ARTICLE TITLE:

Mukasa K et al Prevalence of malignant tumors and adenomatous lesions detected by ultrasonographic screening in patients with autoimmune thyroid diseases. *Thyroid* 2011;21:37-41. Epub October 9, 2010.

SUMMARY OF THE STUDY

The patients studied included 1652 patients with Graves' disease and 2036 patients with Hashimoto's thyroiditis. A

thyroid ultrasound was done on all patients. Those found to have nodules greater than 1 cm in size or appearance suggestive of thyroid cancer underwent fine needle biopsy. In patients with Hashimoto's thyroiditis, 1.8% were found to have papillary thyroid cancer. In patients with Graves' disease, ~1% were found to have papillary thyroid cancer. Among patients who underwent thyroid biopsies, 5.7% were diagnosed with thyroid cancer, which is similar to the frequency in patients without autoimmune thyroid disease.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Patient with autoimmune thyroid disease frequently have enlarged thyroids with nodules found on ultrasound. This study suggests that these patients have the same risk of developing cancerous thyroid nodules as patients without autoimmune thyroid disease. This study is an important reminder that patients with autoimmune thyroid disease may develop cancerous thyroid nodules.

— Ruth Belin, MD

ATA THYROID BROCHURE LINKS

Thyroid Nodules: http://thyroid.org/patients/patient_brochures/nodules.html

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

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

ABBREVIATIONS & DEFINITIONS

Autoimmune thyroid disease: 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.

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.

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THYROID CANCER, continued

Thyroid nodule: an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5% are cancerous.

Thyroid ultrasound: a common imaging test used to evaluate the structure of the thyroid gland. Ultrasound uses soundwaves to create a picture of the structure of the thyroid gland and accurately identify and characterize nodules within the thyroid. Ultrasound is

also frequently used to guide the needle into a nodule during a thyroid nodule biopsy.

Thyroid fine needle aspiration biopsy (FNAB): a simple procedure that is done in the doctor's office to determine if a thyroid nodule is benign (non-cancerous) or cancer. The doctor uses a very thin needle to withdraw cells from the thyroid nodule. Patients usually return home or to work after the biopsy without any ill effects.