



THYROID CANCER

Patients with Graves' disease have a higher incidence of tall-cell variant of papillary thyroid carcinoma

BACKGROUND

Thyroid nodules are very common and are found in up to 50% of the general population. The likelihood any one nodule is a thyroid cancer is in the range of 6-8%. Thyroid nodules are also found in up to 25% of patients with Graves' disease, the most common cause of hyperthyroidism. In these patients, there is a much greater frequency of papillary thyroid cancer and may be as high as 42%. Further, papillary thyroid cancer is found in up to 17% of patients who undergo surgery for regardless of whether there is a nodule present. Some studies suggest that papillary thyroid cancer is more aggressive in patients with Graves' disease, but this is controversial. This study attempts to evaluate the incidence, clinical behavior and outcome of papillary thyroid cancer in patients with Graves' disease who have undergone surgery.

THE FULL ARTICLE TITLE

Boutzios G et al. Higher incidence of tall cell variant of papillary thyroid carcinoma in Graves' disease. *Thyroid* 2014;24:347-54. Epub September 11, 2013; doi:10.1089/thy.2013.0133.

SUMMARY OF THE STUDY

The authors reviewed the medical records of 2188 patients who had a thyroidectomy at a single institution in Crete (Greece) over an 8 year period. They recorded demographic, clinical features and pathology findings. The authors compared patients who had papillary thyroid cancer and Graves' disease to those who had papillary thyroid cancer but no Graves' disease. A total of 66.7% of cancers were not suspected before surgery. A total of 687 patients that underwent surgery (31.4%) were found to have thyroid cancer. The majority were papillary thyroid cancers (570; 26.1%) and 60% of those were cancers

smaller than 1 cm. Spread of the cancer outside the neck were found at the time of diagnosis in 4.9% of patients with papillary thyroid cancer. The overall incidence of papillary thyroid cancer in Graves' disease was 33.7% as compared with other studies (7%-17%). Patients with papillary thyroid cancer and Graves' disease were older, had larger thyroid glands and were more likely to have spread of the cancer to the lymph-nodes in the neck at the time of diagnosis. Tall Cell Variant of papillary thyroid cancer (a more aggressive form of cancer) was significantly more common in patients with Graves' disease. Spread of the cancer to the lymph-nodes in the neck were found in 55% of patients with Tall Cell Variant and Graves' disease compared to 29% of patients with Tall Cell Variant but not Graves' disease.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

An increased risk of thyroid cancer in Graves' disease has been observed in many studies, particularly when patients with Graves' disease have thyroid nodules. Because of the high frequency of papillary thyroid cancer and a greater percentage of the more aggressive Tall Cell Variant, prompt and careful evaluation of nodules should be performed in any patient with Graves' disease.

— M. Regina Castro, MD

ATA THYROID BROCHURE LINKS

Thyroid Nodules: <http://www.thyroid.org/what-are-thyroid-nodules>

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

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

ABBREVIATIONS & DEFINITIONS

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.

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 CANCER, continued

Thyroidectomy: surgery to remove the entire thyroid gland. When the entire thyroid is removed it is termed a total thyroidectomy. When less is removed, such as in removal of a lobe, it is termed a partial thyroidectomy.

Tall Cell variant: A variant of papillary thyroid cancer with cells that are twice as tall as wide and represent 50% of the cancer. These cancers are usually more aggressive and comprise 4-10% of papillary thyroid carcinomas