



EDITOR'S CHOICE — THYROID CANCER

Factors that point toward more aggressive treatment for papillary thyroid microcarcinomas

WHAT IS THE STUDY ABOUT?

Papillary thyroid microcarcinomas are very small cancers (< than 1 cm in diameter) which are often found by chance when patients have thyroid surgery for non-cancerous conditions. Patients are not likely to die from this type of cancer and most do not have a recurrence after the initial therapy. However, the initial therapy is somewhat controversial. Some experts believe more aggressive treatment — including surgery to remove the entire thyroid gland and radioactive iodine therapy after surgery — decreases the chance of cancer returning and improves the ability to detect any return that may occur. Other experts believe a less aggressive approach is warranted and no radioactive iodine therapy is needed. However, recent studies seem to lean toward a more aggressive approach (Cranz F “Papillary thyroid carcinoma and microcarcinoma: is there a need to distinguish the two?” *Clinical Thyroidology for Patients* [serial online]. 2009;2(4):9-10. Belin R “Recurrence after treatment of micropapillary thyroid cancer. *Clinical Thyroidology for Patients* [serial online]. 2010;3(1):11-12.). The authors of this study tried to determine the best treatment approach based on the evaluation of a number of risk factors in a group of patients who had thyroid surgery for reasons other than known cancer, but who were found to have papillary thyroid microcarcinoma on final pathology.

THE FULL ARTICLE TITLE:

Lombardi CP et al. Papillary thyroid microcarcinoma: extrathyroidal extension, lymph node metastases, and risk factors for recurrence in a high prevalence of goiter area. *World J Surg* 2010.

WHAT WAS THE AIM OF THE STUDY?

The aim of this study is to determine the best treatment approach to patients diagnosed with papillary thyroid microcarcinoma.

WHO WAS STUDIED?

The study group included 5355 patients from a single institution (Universita Policlinico in Rome, Italy) who had thyroid surgery in the period between October 2002 and June 2007. A total of 933 (17%) patients were found to have papillary thyroid microcarcinoma.

HOW WAS THE STUDY DONE?

The medical records of the patients were reviewed to find information regarding their age, sex, type of diagnosis, occurrence of other thyroid conditions, extent of thyroid surgery, cancer size, how many lymph nodes were removed, spread of the cancer beyond the thyroid and outside the neck.

WHAT WERE THE RESULTS OF THE STUDY?

Of the 933 patients with papillary thyroid microcarcinoma, 75% of them had thyroid surgery performed for reasons other than known cancer. In the remaining patients, the cancer was known before surgery. Patients with spread of the cancer outside of the thyroid or to the lymph nodes were younger, had larger cancers and had more lymph nodes removed.

Overall, risk factors for spread of the cancer outside of the thyroid included 1) a cancer between 5-10 mm, 2) one that was diagnosed before surgery and 3) one that spread to lymph nodes. These risk factors also predicted recurrence of the cancer.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Some studies show that most (>99%) of these patients are at low risk of distant spread or death from these cancers. Other studies have shown that, although the risk of death is low, return of the cancer is higher if the cancer is known before surgery, if there is more than 1 small cancer within the thyroid and if there is spread of the cancer to the lymph nodes at the time of the initial surgery. Most studies show that the use of radioactive iodine after surgery in these patients has not been shown to reduce recurrences.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that patients with papillary thyroid microcarcinoma that is known before surgery have a more advanced cancer that requires more aggressive treatment than cancers diagnosed after surgery for benign thyroid disorders.

— M. Regina Castro, MD
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ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

Radioactive Iodine Therapy: http://thyroid.org/patients/patient_brochures/radioactive.html

Thyroid Surgery: http://thyroid.org/patients/patient_brochures/surgery.html

ABBREVIATIONS & DEFINITIONS

Papillary microcarcinoma — a papillary thyroid cancer smaller than 1 cm in diameter.

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.

Radioactive iodine (RAI) — this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does not damage the thyroid and is used in scans to take pictures of the thyroid (Thyroid Scan) or to take pictures of the whole body to look for thyroid cancer (Whole Body Scan).