



THYROID CANCER

WHAT IS THE STUDY ABOUT?

Papillary microcarcinoma is a form of thyroid cancer where the cancer is very small. This is often found in patients that have their thyroid removed for reasons other than cancer and the cancer is found by “accident”. Very few patients with Papillary microcarcinoma will die of their cancer, so it is not clear how aggressive treatment should be for these patients. This study looks at what features in these patients may cause the cancer to come back or spread after the initial treatment.

THE FULL ARTICLE TITLE: Mercante G, Frasoldati A, Pedroni C, Formisano D, Renna L, Piana S, Gardini G, Valcavi R, Barbieri V. Prognostic factors affecting neck lymph node recurrence and distant metastasis in papillary microcarcinoma of the thyroid: results of a study in 445 patients. *Thyroid* 19(7) 2009:1-10.

WHAT WAS THE AIM OF THE STUDY?

This study looks at the clinical course of very small papillary thyroid cancers and what features in these patients may cause the cancer to come back or spread after the initial treatment.

WHO WAS STUDIED?

This study looked at records of a group of 1,030 patients who were treated for papillary thyroid cancer at the Thyroid Disease Center in Reggio Emilia, Italy, between 1978 and 2003. From this large group, 445 patients with very small papillary thyroid cancers (<1 cm) were chosen for this study. All patients were also treated with radioactive iodine I-131 after surgery. Patients were followed up with I-123 whole body scans, laboratory tests and ultrasound to evaluate for tumor recurrence.

HOW WAS THE STUDY DONE?

The records of patients in the study were reviewed. All patients were initially treated with surgery; either the whole thyroid was removed (total thyroidectomy) or one lobe and the middle was removed (partial thyroidectomy). The cancers were examined after they were removed. The thyroid is covered by a capsule of fibrous cells. If the cancer spread into or through the capsule, it was called thyroid capsular invasion.

WHAT WERE THE RESULTS OF THE STUDY?

Half of the Papillary microcancers were found after thyroid surgery performed for conditions other than cancer. Most patients (90%) had a total thyroidectomy as the initial surgery. In an average of 5.3 years after the initial surgery, only 17 patients (3.8%) still had cancer in the neck region. In only 4 patients (0.9%) had the cancer spread outside of the neck. The risk factors for persistent cancer were thyroid capsular invasion,

spread into surrounding tissues in the neck or spread to the neck lymph nodes at the time of the initial surgery.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

Some studies have shown that patients with Papillary microcancers have ~ 5% risk of persistent cancer and a 2% risk of dying from this cancer but do not provide information on the cancer at the time of surgery. Other studies have shown that spread into the lymph nodes and into the tissues of the neck and the size closer to 1 cm were risk factors for continued cancer. In contrast to this study, several studies found that older age was a risk factor.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

More aggressive therapy (total thyroidectomy and radioactive iodine I-131 treatment) should be considered the treatment of choice in patients with Papillary microcarcinomas that have thyroid capsular invasion, spread into surrounding tissues in the neck or spread to the neck lymph nodes at the time of the initial surgery. In addition, solitary Papillary microcarcinomas without these risk factors may be treated with a less aggressive approach.

— M. Regina Castro, MD

ATA THYROID BROCHURE LINKS

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

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

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

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer — the most common type of thyroid cancer

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

Total thyroidectomy — Surgery to remove the entire thyroid gland

Partial thyroidectomy — surgery that removes only part of the thyroid gland (usually one lobe with or without the isthmus)

Radioactive iodine — 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)