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THYROID CANCER

WHAT IS THE STUDY ABOUT?

Papillary microcarcinoma is a form of thyroid cancer where the cancer is very small (<1 cm). While only a small number of patients with papillary cancer will die from their cancer, most of those that do die will have larger cancers when the cancer is initially found. Since very few patients with Papillary microcarcinoma will die from their cancer, it is not clear how aggressive treatment should be for these patients. If one could predict which microcarcinomas come back after the initial treatment, one could target those cancers for more aggressive treatment when they are initially discovered. Known risk factors for recurrence of larger thyroid cancers are: 1) spread to lymph nodes in the neck, 2) extension of the cancer outside of the thyroid, 3) spread of the cancer into the blood and 4) more than one cancer found within the thyroid gland. This study looked at how common one or more of these findings were found in papillary microcarcinomas and whether these risk factors were associated with cancer recurrence in these smaller cancers.

THE FULL ARTICLE TITLE: Arora N, Turbendian HK, Kato MA, Moo TA, Zarnegar R, Fahet TJ. Papillary thyroid carcinoma and microcarcinoma: is there a need to distinguish the two? Thyroid 2009;19:473–77.

WHAT WAS THE AIM OF THE STUDY?

The aim of this study was to determine how common known risk factors for cancer recurrence were found in papillary microcarcinomas and whether these risk factors were associated with cancer recurrence in these smaller cancers.

WHO WAS STUDIED?

This study looked at 184 patients with papillary thyroid cancer seen at New York Presbyterian Hospital–Cornell over a ten year period from 1995 to 2005. A total of 124 patients had papillary thyroid cancer (PTC) and 60 patients had papillary thyroid microcarcinoma (PTMC). All of the patients had their entire thyroid glands removed by surgery.

HOW WAS THE STUDY DONE?

The records of patients in the study were reviewed. At the time of initial surgery, patients were evaluated for the following risk factors: 1) spread to lymph nodes in the neck, 2) extension of the cancer outside of the thyroid, 3) spread of the cancer into the blood and 4) more than one cancer found within the thyroid gland. Patients were followed over the study period for cancer recurrence.

WHAT WERE THE RESULTS OF THE STUDY?

Spread of the cancer to lymph nodes in the neck was found in 63 (51%) patients with PTC and 26 (43%) patients with PTMC. Extension of the cancer outside of the thyroid was found in 19 (14%) PTC patients and 3 (4.5%) PTMC patients. Spread of the cancer into the blood was found in 18 (13%) PTC patients and 4 (6%) PTMC patients. More than one cancer found within the thyroid gland was found in 71 (52%) of PTC patients and 37 (56%) of PTMC patients.

Cancer recurrence was found in 29 (21.3%) of the patients with PTC and 11 (17%) of the patients with PTMC at an average of 2.7 years after surgery. The main predictor of recurrence in PTMC was spread of the cancer into the blood.

None of 14 patients who were unexpectedly found to have PTMC after surgery for what was thought to be noncancerous disease (ie hyperthyroidism) had recurrence of their thyroid cancer after initial surgery.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

The high recurrence rate (17%) for PTMC is surprising since several prior studies have reported recurrence rates ~5%. Spread into the blood has been reported to be a risk factor for recurrence of PTMC by other studies, as was spread to lymph nodes in the neck and extension of the cancer outside of the thyroid.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that spread of the cancer into the blood is an excellent predictor of recurrence for both PTC and PTMC. The study also demonstrated a similar rate of spread to lymph nodes and extension outside the thyroid recurrence for both small thyroid in both PTC and PTMC. More importantly, this study showed a similar rate of recurrence for PTMC and PTC, although the rate of recurrence of PTMC was significantly higher than many other prior studies. This study brings into question the use of a less-aggressive approach to smaller thyroid cancers as is recommended in current therapeutic guidelines.

—Frank Cranz, MD

ATA THYROID BROCHURE LINKS

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

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THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

Papillary thyroid cancer (PTC) — the most common type of thyroid cancer.

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

Cancer recurrence — this occurs when the cancer comes back after an initial treatment that was successful in destroying all detectable cancer at some point

Lymph node — a bean-shaped organ that plays a role in removing what the body considers harmful, such as infections and cancer cells.