



THYROID CANCER

Papillary microcarcinomas without unfavorable features may be candidates for observation alone

WHAT IS THE STUDY ABOUT?

Thyroid nodules are very common and are seen in up to 50% of individuals who have neck imaging studies for a variety of reasons. Thyroid cancer is found in up to 8% of thyroid nodules. Ultrasound-guided fine-needle aspiration biopsy of thyroid nodules has markedly changed the approach to the diagnosis of thyroid cancer. As a result, there has been an increase in the identification of papillary microcarcinomas, which are small cancers <1 cm in size. Because patients are not likely to die from this type of cancer, it is unclear what is the best approach to the treatment of these patients. While most patients with a diagnosis of papillary cancer after a biopsy of a thyroid nodule undergo surgery, some patients with nodules <1 cm may choose to simply follow these nodules without surgery. The authors of the present study have previously reported on a series of 162 patients with papillary microcarcinomas who declined surgery — 70% had no change in their nodules while 1.2% developed spread of the cancer to the lymph nodes. The present study is an extension of this earlier study to determine the clinical course of papillary microcarcinomas in patients who initially decline surgery.

THE FULL ARTICLE TITLE:

Ito et al. An observational trial for papillary thyroid microcarcinoma in Japanese patients. *World J Surg* 2010;34:28-35.10.1007/s00268-009-0303-0 [doi].

WHAT WAS THE AIM OF THE STUDY?

The aim of this study is to determine what is the clinical course of papillary microcarcinomas in patients who initially decline surgery.

WHO WAS STUDIED?

Between 1993 through 2004, a diagnosis of papillary microcarcinoma was made after ultrasound screening and fine-needle aspiration biopsy in 1395 patients, 1055 of whom had immediate surgery, and 340 of whom made up the study group after being given the option of not having surgery.

HOW WAS THE STUDY DONE?

The records of the patients were reviewed. The 340 patients that did not undergo surgery were followed with ultrasound

and chest X-rays more than once per year. Surgery was recommended when the nodules containing the papillary microcarcinomas were next to the trachea (breathing tube) or the edge of the thyroid, when the nodule increased by >3 mm or when it appeared that there was spread to lymph nodes.

WHAT WERE THE RESULTS OF THE STUDY?

In the patients that underwent immediate surgery, 2 patients were found to have spread of the cancer outside the neck. Over the course of the study, 32 (3%) patients had recurrence of the cancer after surgery. Most of these recurrences were in lymph nodes within the neck. In the group that declined surgery there were 314 women (92%) and 26 men (8%) who were followed for an average of 51 months. A total 109 (32%) of this group required surgery. Five of these patients developed spread to the lymph nodes. None of the 109 patients who had surgery developed a recurrence of their cancer.

HOW DOES THIS COMPARE WITH OTHER STUDIES?

In the initial study by the authors, only 6.7% of the nodules containing the papillary microcarcinomas had increased by >3 mm during 5 years of follow-up and spread of the cancer to the lymph nodes occurred in 1.7% of the patients. Another study suggested that the size of the papillary microcarcinomas was important: recurrence of the cancer after a 35 year follow-up was 14% in patients with cancers 6-10 mm as opposed to 3% of the cancers were <6 mm.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that surgery may not be needed in all patients with nodules <1 cm with biopsy results indicating papillary cancer. Unfavorable features that should lead to surgery include a location next to the trachea (breathing tube) or the edge of the thyroid and evidence of spread to lymph nodes. Papillary microcarcinomas without these unfavorable features may be followed without surgery.

— Alan Farwell, MD

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THYROID CANCER, continued

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.

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.



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