



THYROID NODULES

Do benign thyroid nodules require long-term follow-up?

BACKGROUND

Thyroid nodules are quite common in the population, being present in about half of all adults. Approximately 5% of nodules are cancerous and most of the latter represent low-grade malignancies. Fine needle biopsy of large or suspicious nodules seen on ultrasound examination is the procedure of choice for evaluating such nodules. Once a biopsy is read as benign there should be a <1% risk that the nodule is actually cancerous. One question that is unanswered is how long a benign nodule should be monitored to see if there is a change in the nodule that would warrant further evaluation or a repeat biopsy. The present study attempts to answer this question by looking at the outcome of patients who had follow-up examination for less than 3 years or continued exams for 3 or more years after the initial fine needle biopsy.

THE FULL ARTICLE TITLE

Lee S et al. The biopsy-proven benign thyroid nodule: is long-term follow-up necessary? *J Am Coll Surg* 2013;217:81-9. Epub May 6, 2013.

SUMMARY OF THE STUDY

The records of 848 patients who underwent a fine needle biopsy at MD Anderson Cancer Center between 1998 and 2009 and were found to have benign cytology were reviewed. Of these patients, 92 had surgery, 280 had no further follow-up, 226 had follow-up at less than 3 year intervals and 140 had follow-up at 3 or more years after the initial biopsy. The average follow-up in the short follow-up group was 13 months as compared to 57 months in the long follow-up group. As expected, the long

follow-up group patients had more ultrasounds and more repeat thyroid biopsies performed. A total of 26 nodules had a 2nd biopsy with the most common reason being increased growth. Of these, 20 were still read as benign, 3 were follicular lesions (higher risk for cancer), 2 were nondiagnostic and 1 was suspicious for papillary thyroid cancer (which was proven at surgery). Only 2 cancers were found and these were picked up within 3 years of follow-up.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The authors concluded that since long-term follow-up of patients with thyroid nodules that are initially read as benign does not improve the cancer detection rate, but does increase the use of ultrasound or repeat fine needle aspirations, consideration should be given to stopping further follow-up after 3 years.

This suggestion would be welcome news to patients who would be able to forego the time and expense of continued visits to the endocrinologist, repeat ultrasounds and potentially, repeat fine needle biopsies of the thyroid. However, further studies are required before this can be considered on a regular basis.

— Glenn D. Braunstein, M.D.

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>

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.

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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THYROID NODULES, continued

Inadequate/Insufficient biopsy: this happens with not enough cells are obtained during the biopsy to provide a diagnosis. This occurs in 5-10% of biopsies. This often results in the need to repeat the biopsy.

Indeterminate thyroid biopsy: this happens usually when the diagnosis is a follicular or hurthle cell lesion. Follicular and hurthle cells are normal cells found in the thyroid. Current analysis of thyroid biopsy results

cannot differentiate between follicular or hurthle cell cancer from noncancerous adenomas. This occurs in 15-20% of biopsies and often results in the need for surgery to remove the nodule.

Suspicious thyroid biopsy: this happens when there are atypical cytological features suggestive of, but not diagnostic for malignancy. Surgical removal of the nodule is required for a definitive diagnosis.