



THYROID CANCER

Is radioactive iodine as effective as repeat surgery in thyroid cancer patients who had an initial lobectomy?

BACKGROUND

Thyroid nodules are very common and raise the possibility of thyroid cancer when discovered. When a biopsy of the thyroid nodule is indeterminate for thyroid cancer, the surgery recommended is usually removal of the lobe containing the nodule (lobectomy), leaving the opposite lobe. This is because most of the indeterminate nodules turn out not to be cancer. When the pathology does show a cancer, patients usually undergo a repeat surgery to remove the remaining lobe (completion thyroidectomy). This may not be possible in patients with vocal cord injury after the lobectomy or those who refuse further surgery. Instead, low dose radioactive iodine therapy can be used to destroy the remaining lobe. This study compared the overall outcomes of thyroid cancer patients after completion thyroidectomy with those who had radioactive iodine therapy to destroy the remaining lobe.

THE FULL ARTICLE TITLE:

Barbesino G et al. Thyroid lobe ablation with radioactive iodine as an alternative to completion thyroidectomy after hemithyroidectomy in patients with follicular thyroid carcinoma: long-term follow-up. *Thyroid*. December 27, 2011 [Epub ahead of print].

SUMMARY OF THE STUDY

The study included 126 thyroid cancer patients followed for up to 24 years at Massachusetts General Hospital. A total of 29 patients had a total thyroidectomy and

97 patients had an initial lobectomy. Of those with a lobectomy, 37 received radioactive iodine ablation of the remaining lobe while 68 had a completion thyroidectomy to remove the remaining lobe.

Overall, there was no difference in terms of recurrence or persistence of cancer in any of the treatment groups. The patients who underwent radioactive iodine ablation did have higher persistent thyroglobulin levels as compared to those who had surgery.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that radioiodine ablation of the remaining lobe can be used as an alternative to further surgery in patients who initially had only a lobectomy for thyroid cancer. If these results are confirmed, radioactive iodine therapy may be preferable to a repeat surgery.

— Mona Sabra, MD

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

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ABBREVIATIONS:

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 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.

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.

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THYROID CANCER, continued

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).

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.

Lobectomy: surgery to remove one lobe of the thyroid.

Completion thyroidectomy: surgery to remove the remaining thyroid lobe in thyroid cancer patients who initially had a lobectomy.