



THYROID CANCER

How often is medullary thyroid cancer found in both thyroid lobes in people without hereditary medullary thyroid cancer?

BACKGROUND

Medullary thyroid cancer comes in 2 forms: 1) inherited and occurring in several members of a family and 2) sporadic and occurring in patients with no family history of thyroid cancer. The primary initial management of medullary thyroid cancer is surgery. Occasionally, the first surgery is a lobectomy (removal of just 1 lobe). In patients with the inherited form or with mutations such as RET in the cancer, a second surgery is done to completely remove the entire thyroid because of the risk of the cancer being in both lobes. In patients with the sporadic form, it is less clear that there is any risk of the cancer being in both lobes. The primary aim of this study was to determine how often medullary thyroid cancer is found in both lobes of the thyroid in individuals with sporadic medullary thyroid cancer who have had a total thyroidectomy. The reason for this study was to inform future guidelines on surgical management of sporadic medullary thyroid cancer, specifically relating to the extent of thyroid surgery.

THE FULL ARTICLE TITLE

Essig GF Jr, et al. Multifocality in sporadic medullary thyroid carcinoma: an international multicenter study. *Thyroid*. October 11, 2016 [Epub ahead of print].

SUMMARY OF THE STUDY

This is a multi-center study that looked at patients charts that previously had surgery. The authors invited participation from 53 clinical centers, and ultimately 11 clinical centers, from 7 countries, provided data for the study. Data from 306 individuals with sporadic medullary

thyroid cancer who had surgery to remove both sides of the thyroid were included in the final analysis. The authors reported that 5.6% of these individuals (17/306) had medullary thyroid cancer found on both sides of the thyroid. Furthermore, for a subgroup of individuals who were reported as having negative RET mutation testing had a similar rate of cancer in both lobes (5.6%, 14/249). The authors also reported that for individuals who had only one focus medullary thyroid cancer present in one lobe of the thyroid, the rate of having bilateral medullary thyroid cancer was 2.8% (6/212). Furthermore, if there were multiple foci of medullary thyroid cancer in one lobe of the thyroid, the rate of bilateral medullary thyroid cancer was 21.6% (8/37).

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The authors concluded that total thyroidectomy should remain as the standard of care for sporadic medullary thyroid cancer. The authors also indicated that more research is needed to confirm whether the presence of multiple foci of medullary thyroid cancer in a lobe may guide decision-making about completion thyroidectomy for individuals with sporadic medullary thyroid cancer whose initial surgery was removal of one lobe.

— Anna M. Sawka, MD, PhD, FRCPC

ATA THYROID BROCHURE LINKS

Thyroid Cancer (Medullary): <http://www.thyroid.org/medullary-thyroid-cancer/>

Thyroid Surgery: <http://www.thyroid.org/thyroid-surgery/>

ABBREVIATIONS & DEFINITIONS

Medullary thyroid cancer: a relatively rare type of thyroid cancer that often runs in families. Medullary cancer arises from the C-cells in the thyroid.

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.

Total thyroidectomy: surgery to remove the entire thyroid gland.



THYROID CANCER, continued

Calcitonin: a hormone that is secreted by cells in the thyroid (C-cells) that has a minor effect on blood calcium levels. Calcitonin levels are increased in patients with medullary thyroid cancer.