



THYROID CANCER

The intraoperative detection of nodal metastases from papillary thyroid cancer is poor and is not impacted by a surgeon's level of training

BACKGROUND

Papillary thyroid cancer is the most common type of thyroid cancer and generally has a good prognosis. However, if papillary thyroid cancer spreads to lymph nodes in the neck or extends beyond the capsule of a lymph node, there is a higher risk in cancer recurrence after the initial therapy. Removing all the lymph nodes in the central neck during the initial surgery (prophylactic surgery) is controversial, with most surgeons preferring removal only the abnormal lymph nodes. However, some studies suggest that it may be difficult or impossible for a surgeon to determine the extent of lymph node involvement at the time of surgery. This study examined whether the experience of the surgeon played a role in identifying lymph nodes involved in cancer during the initial thyroid surgery.

THE FULL ARTICLE TITLE:

Scherl S et al, The effect of surgeon experience on the detection of metastatic lymph nodes in the central compartment and the pathologic features of clinically unapparent metastatic lymph nodes: what are we missing when we don't perform a prophylactic dissection of central compartment nodes in papillary thyroid cancer? *Thyroid*. April 30, 2014.

SUMMARY OF THE STUDY

A total of 47 patients with papillary thyroid carcinoma and no preoperative ultrasonographic evidence of central neck nodal metastases were included in the study. All patients were operated on by one of two surgeons at a single tertiary care hospital. Through sense of touch and visual inspection, patients were assessed intraoperatively for clinically apparent lymph node involvement. Assessments of the central compartment were performed intraoperatively but before thyroidectomy by experienced attending surgeons and by less-experienced trainees. Intraoperative findings were compared with pathologic findings after central neck dissection.

One or more involved lymph nodes were found in 62% of patients. More than half of these (36%) had lymph nodes that were identified by the surgeons during the operation. Over one fourth of all patients (26%) were found to have microscopic nodal metastases. The largest normal appearing lymph node that had cancer in it was 1.3 cm. More than one third of patients had at least five positive nodes. Over one fourth of patients had cancer that extended beyond the limits of a lymph node. Based on the surgeon's impressions, lymph node spread was missed 36% of the time. Results were stratified by the surgeon's level of experience. Surgeon experience did not impact the likelihood of detecting lymph node involvement in the central neck.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Regardless of surgical experience, determining the involvement of lymph nodes at the time of surgery is difficult, especially in lymph nodes that are small. According to this study, having more experience does not improve a surgeon's ability to detect lymph node involvement and there is a substantial risk of missing involved lymph nodes when relying on the surgeon's judgment alone. What remains unknown is if these lymph nodes are left in place, instead of removed at the time of surgery, would they eventually cause recurrence or negatively impact survival? While this study suggests that prophylactic surgery may be a better option, routinely performing prophylactic central neck dissection remains controversial and should be discussed with the treating physicians.

— Ronald B. Kuppersmith, MD, FACS

ATA THYROID BROCHURE LINKS

Thyroid cancer: <http://www.thyroid.org/cancer-of-the-thyroid-gland>

Thyroid Surgery: http://thyroid.org/patients/patient_brochures/surgery.html



THYROID CANCER, continued

ABBREVIATIONS & DEFINITIONS

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

Papillary thyroid cancer: the most common type of thyroid cancer.

Cancer metastasis: spread of the cancer from the initial organ where it developed to other organs, such as lymph nodes, the lungs and bone.

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

Central neck compartment: the central portion of the neck between the hyoid bone above, and the sternum and collar bones below and laterally limited by the carotid arteries.

Prophylactic central neck dissection: careful removal of all lymphoid tissue in the central compartment of the neck, even if no obvious cancer is apparent in these lymph nodes.