OBJECTIVES

Papillary thyroid cancer is known quite commonly to metastasize to lymph nodes in the neck. Approximately 30-40% of patients will have metastatic disease to the lymph nodes. Management of the metastatic disease, both in the central compartment and the lateral compartment, has generated considerable debate. Follow up of patients who have initially undergone surgical treatment has led to a paradigm shift in the use of thyroglobulin assay, ultrasound, ultrasound guided needle biopsy, and evaluation of needle biopsy with cytology and presence of thyroglobulin in the needle biopsy washout. Despite full initial treatment, it is not uncommon to see a patient return with cervical nodal metastasis.

STUDY DESIGN

Localization of these lymph nodes may be difficult, especially if they are clinically non-palpable. A majority of patients are now evaluated for hyperthyroglobulinemia, where a routine evaluation of the neck will reveal a suspicious or enlarged lymph node. Fine needle aspiration biopsy of such a lymph node will confirm the diagnosis of metastatic thyroid carcinoma. However, at the time of surgery an index node might not be identified and it is likely that the index lymph node with positive cytology may be missed. The surgical procedure of modified neck dissection for recurrent metastatic papillary carcinoma has recently become a common procedure on our Service.

METHODS

In two patients, surgical exploration and appropriate neck dissection (selective neck dissection) did not reveal the index metastatic lymph node in the final pathology report. The subsequent imaging study revealed persistent abnormality akin to preoperative evaluation in one patient.

RESULTS

Several neck nodes were removed in both neck dissections. However, in one patient there was no identified neck node with positive histology in the specimen. In the other patient, stable neck nodes were recognized during the follow up ultrasound. Both patients had suspected metastatic disease in the supraclavicular area, where there is considerable scalene fat tissue and difficulty in exposing and evaluating this area due to apex of the lung, subclavian vessels, and clavicle.

This clearly represents an entity yet to be better defined as ‘missing neck nodes’. These missed neck nodes may create concern amongst patients, and may raise anxiety during follow up.

CONCLUSIONS

Appropriate presurgical evaluation with localization studies and intraoperative assistance, either with sestamibi, radioactive iodine, or ultrasound guided needle localization may be helpful. The role of intraoperative ultrasound remains undefined at this time. It is quite likely we will see more of this entity – missing nodes – as our experience increases in the field of reoperative neck surgery for metastatic papillary carcinoma of the thyroid. Preoperative exact localization of suspicious nodes with ultrasound either in the operating room or in the radiology department may be helpful.

1. Patients should be warned that the index node may be missed, and the patient could return with persistent disease similar to previous ultrasound and cross sectional imaging.

2. The neck node may be entangled in paratracheal scar tissue and may be difficult to identify.

3. There is a concern about injury to the parathyroid glands and recurrent laryngeal nerve.

4. The patient may return with recurrent disease in the same side of the neck, the opposite side, or in the thyroid bed or paratracheal area.

5. Patients should be warned that their thyroglobulin levels may not come down to previous baseline levels.

6. Inability to find the index metastatic lymph node during the neck dissection is a humbling experience for the operating surgeon. One should be prepared to manage the patient accordingly.

7. Patients with multiple positive nodes from papillary thyroid cancer may not be completely cured biochemically as they may remain with mild, persistent hyperthyroglobulinemia.