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Right paraesophageal lymph node metastasis

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Abstract

Zhang¹ and colleagues at Peking Union Medical College in Beijing have described their experience of dissecting the right paraesophageal lymph node metastasis and correlated the overall incidence to important prognostic factors of the primary tumor and lateral nodal metastasis. Zhang et al., reviewed their experience of 246 patients who underwent surgery for papillary thyroid carcinoma. They noted right paraesophageal lymph node metastasis (RPELN) in 33 patients (13.4%). Their multivariate analysis showed higher incidence of RPELN metastasis in patients with right sided tumor, 3 of more lateral positive lymph nodes and positive right central compartment nodes. The prevalence of RPELN metastasis was significantly higher (26%) in recurrent cases.

The subject of central compartment node dissection has become a controversial issue in recent years. In 2006, when the American Thyroid Association (ATA) published their guidelines a casual statement was made about routine central compartment nodal dissection.² There was considerable debate about this over the next few years mainly related to the complications of this procedure as a routine practice. We recognize high incidence of microscopic metastatic disease extending up to 40%. We also recognize that the impact of this micrometastasis is very little especially in the low risk thyroid cancer. Nodal dissection seems to have higher incidence of complications related to nerve injury and parathyroid problems as described in this manuscript also. In 2009, the ATA guidelines changed and more risk oriented approach was taken where the nodal dissection may be considered if the primary tumor was large, gross extrathyroidal extension or aggressive histology.² The central compartment is divided in various groups including Delphian nodes, right and left paratracheal nodes and superior mediastinal nodes. Interestingly, the level VII nodes are considered to be N1b which groups the patients above 45 into Stage IV. This issue needs to be revisited and I am sure there will be more discussion about this in the future staging systems.

The authors have subdivided the right paratracheal lymph nodes into right paraesophageal lymph nodes. These are the lymph nodes lateral to the right recurrent laryngeal nerve. The right recurrent laryngeal nerve goes in an oblique angular fashion in the paratracheal area from the lateral aspect to the medial aspect and there is a fatty content lateral to the right

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recurrent laryngeal nerve. Whether dividing this into two portions makes any material difference remains unclear. Anytime the paratracheal or tracheo-esophageal groove lymph node dissection is undertaken it is understood that one would clean up all gross disease however interestingly there are several papers over the last decade in the literature most of which are from Korea, Japan and this one from China.³⁻⁶ The authors have also included re-operative patients which to me becomes a more complicating issue since in the re-operative set up it is critical to clean up the entire paratracheal area to avoid further recurrences. Clearly, dissecting the right paraesophageal lymph nodes is more difficult and as shown in the literature having slightly higher risk of nerve injuries. Even though the description of the central compartment includes lymph nodes from the hyoid to subclavian artery, there are hardly any lymph nodes above the superior pole of the thyroid and rarely an elective nodal dissection is performed in this area.

Even though concept of identifying and resecting the paraesophageal lymph node is a good one, I am not sure whether every thyroid surgeon who performs the paratracheal dissection makes a critical issue of this. We would generally explore the paratracheal area and dissect all the suspicious or abnormal lymph nodes in this region. Our general philosophy is to evaluate the paratracheal area and dissect the lymph nodes only if they are enlarged or suspicious or if frozen section is undertaken and the nodes are positive. In the U.S. where the incidence of Hashimoto's thyroiditis is quite high, the enlarged paratracheal nodes are commonly noted. Resecting these nodes in each and every patient may lead to more complications. It is very important to consider the risk group stratification of the primary tumor and undertake appropriate surgery both in terms of the extent of thyroidectomy, central compartment node dissection, etc in relation to the risk group analysis. Clearly, prognostic factors in thyroid cancer are extremely important and the authors have shown high incidence of nodal metastasis in lesions involving the right lobe of the thyroid. If there are obvious right central compartment lymph nodes, one would consider high incidence of metastatic disease in the paraesophageal area and also to level VII area. In patients presenting with lateral nodal metastasis in the neck, clearly there is a higher incidence of nodal metastasis to the central compartment which generally are the first echelon nodal metastasis. There is probably an exception to this rule. If the tumor in the upper pole of the thyroid where the first echelon lymph nodes may be at level II and III in the lateral neck. I am not sure if the authors made every effort to identify paraesophageal lymph nodes in each case and send them separately. We would generally clean up these nodes anyway. The major question is, is this subdivision of the right central compartment necessary and is it beneficial to the overall care of the patient. Obviously, the larger the tumor burden, the higher the incidence of recurrence. Recently, there appears to be considerable interest in avoiding radioactive iodine up to 5 microscopic nodal metastasis. The authors have mentioned about the bone scan being performed. We rarely consider bone scan. Nowadays we would rather use radioactive iodine scanning or a PET scan if indicated. The conclusions reported by the authors in this manuscript are similar to previous publications from Korea by Lee et al., Bae et al. and by Ito and Miyauchi from Kuma Hospital in Kobe, Japan.³⁻⁶ I would like to congratulate these authors for bringing up this complex issue of elective paratracheal nodal dissection, and right paraesophageal lymph node metastasis in papillary thyroid carcinoma. However its clinical relevance and surgical implication remains unclear.

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