A clinical study: Selective neck dissection in laryngeal squamous cell carcinoma

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Metastasis of tumors to level IIb lymph nodes is rare in patients with laryngeal squamous cell carcinoma (LSCC); this area can be ignored during selective neck dissection (SND) to avoid damaging the spinal accessory nerve (SAN), making this surgery more conservative and minimizing SAN morbidity, according to the March 2012 issue of *Otolaryngology–Head and Neck Surgery*.

The authors acknowledge that the medical literature stresses the importance of preserving the SAN to prevent postoperative limitations in shoulder function and pain in patients who undergo neck dissection. They note, however, that "insufficiency in shoulder function has been observed in 31% to 60% of cases in which the SAN was preserved." Studies show nerve insufficiency is present despite the SAN preservation due to the stretching and retracting of the nerve to clean level IIb.

Given this risk, the authors sought to determine if the frequency of metastasis to the level IIb area warranted inclusion in neck dissection for LSCC.

The study sample included 81 patients diagnosed with LSCC and treated with total or partial laryngectomy with neck dissection, according to tumor size and location, between January 2006 and January 2011. In total, 148 neck dissection specimens were examined histopathologically, and those with level IIb metastasis were identified.

Study results show level IIb metastasis was seen in 5 (6%) of 81 patients,

representing 5 of 148 neck dissection specimens. Two of these 5 patients were clinically N+ (6%), and 3 were clinically N– (6%). The relationship between level IIb metastasis and clinical N stage was not statistically significant ($P \geq .05$). No statistically significant relationships between the other parameters and level IIb involvement were found. The study group consisted of 79 men and 2 women. The mean age was 60.35 years (range, 44-73 years). In total, 133 SND (90%) were SND II-IV, 14 (9%) were SND II-V, and 1 (6%) was modified radical neck dissection type II.

In the study, the authors indicate Metastasis to level IIb lymph nodes was never isolated. Involvement to level IIb always accompanied the involvement of level IIa and level III lymph nodes. Therefore, the authors believe that the peroperative frozen section examination of the selective neck dissection can determine the decision of the dissection of level IIb lymph nodes.

Based on the study findings, the authors indicate: "Level IIb nodal involvement is very rare in LSCC. Therefore, the area can generally be preserved in elective neck dissection to lessen morbidity and, specifically, to avoid damaging the function of the spinal accessory nerve."

More information: "The Necessity of Dissection of Level IIb in Laryngeal Squamous Cell Carcinoma: A Clinical Study" *Otolaryngology–Head and Neck Surgery*.

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