

Background

- The oncologic utility of elective neck dissection (END) for during salvage laryngectomy following radiation(RT)/chemoradiation(CRT) is debated in patients with clinically and radiologically negative nodal metastasis (NO neck)
- Prior studies have suggested nodal positivity rates at or less than 20% in salvage cases(1).
- Dissection in the irradiated neck is associated with increased post-operative complications including wound breakdown, shoulder dysfunction, and fibrosis (2).
- Limited neck dissection in salvage cases may allow for oncologic control as well as improved functional outcomes.

Objective

- Our objective was to assess the primary involved neck levels of positive nodal disease during salvage laryngectomy cases.

Methods

- A retrospective review was conducted from 2017-2022 of patients undergoing salvage laryngectomy and bilateral neck dissection for recurrent or persistent primary site disease with NO neck disease.
- Surgical pathology reports were reviewed for the presence and location of positive nodal disease.
- Results were reported with descriptive statistics.

Results

- 74 patients underwent salvage laryngectomy during the study period.
- All patients had T3/T4 disease. The majority (67,90.5%) had transglottic disease. 5 patients had supraglottic disease and 2 had subglottic disease.
- 62 patients underwent bilateral neck dissection including levels II-IV. 27 patients underwent level VI (paratracheal) neck dissection
- The nodal positivity was 10.8%. Positive nodal disease was limited to levels IIa and III. (Table 1)
- All involved lymph nodes were on the ipsilateral side of the tumor. No patients had contralateral involvement by occult nodal disease.
- Paratracheal lymph nodes were only positive in one patient with a previous history of hemilaryngectomy followed by CRT for positive margins and presented later with local laryngeal recurrence with hypopharyngeal involvement.

Table 1. Incidence of Occult Metastasis

Neck Level	Number of patients	Number with occult metastases	Incidence of occult metastasis
Level IIA S	74	5	6.8%
Level IIB S	74	0	0%
level III S	74	4	5.4%
Level IV S	74	0	0%
Level II C	61	0	0%
Level III C	61	0	0%
Level IV C	61	0	0%
Level VI	27	1*	3.6%*

*S=ipsilateral; C=contralateral, * = see results discussion*

Conclusions

- The overall incidence of occult nodal disease during salvage laryngectomy is low. Our findings are in keeping with prior studies suggesting occult nodal disease occurs 11-13% of the time (3,4).
- Our study suggests that limited neck dissection – consisting of ipsilateral dissection of levels II and III – may be sufficient for oncologic control.
- Paratracheal lymph node dissection is recommended in recurrences with previous surgical intervention or with subglottic region involvement.
- We recommend further multi institutional collaborative and prospective trials studying limited and selective neck dissection in the salvage laryngectomy population to assess the impact on function, recurrence, and survival.

References

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