

Relation of upper neck dissection and recurrence of carcinoma tongue in parotid lymph nodes

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Abstract

Background: Parotid lymph node (LN) metastasis occurs most frequently from squamous cell carcinoma (SCC) of the head and neck. In SCC of the head and neck, metastatic involvement of the parotid gland is associated with a poor prognosis but the parotid LN remains an uncommon site of metastasis for oral squamous cell carcinoma. The management of tongue carcinoma is primarily surgical, with radiation also having an important role mainly in advanced disease, poor surgical candidates, unresectable disease, and importantly, as an adjuvant to surgery in some cases. Unless there is a clear contraindication for surgery or the tumor is unresectable, surgery should be offered as primary treatment for tongue squamous cell carcinoma.

Aims and Objectives: Objectives of this research article primarily deals with,

- Rates of recurrence of carcinoma tongue at parotid lymph node in patients undergoing upper neck dissection to those who don't undergo upper neck dissection.
- To establish the surgical standard in patients of carcinoma tongue undergoing surgical intervention dissection.

Materials and Methods: Our observational study focuses on determining outcome and recurrence together in patients undergoing high neck dissection, resection of tail of parotid and concurrent lymph nodes. We reviewed the records of 110 patients with oral carcinomas who had undergone neck dissections between April 2017 and December 2019.

Results and Observations: The above 110 patients who underwent neck dissections out of which high neck dissection, resection of tail of parotid along with its lymph nodes was undertaken on 86 patients. 24 patients were not subjected to high neck dissection in view of localized disease and negative level I, II & III nodes. Patients were followed up over a 2-year period. Recurrence was found in 14 patients who underwent high neck dissection out of the 86 in total and in 16 patients who did not undergo high neck dissection out of the 24 in total.

Conclusion: Patients undergoing high neck dissection show a recurrence rate of 16.2% as opposed to patients not undergoing high neck dissection showing a recurrence rate of 66%. Metastasis of the parotid LN was observed to be associated with a poor prognosis in SCC of the head and neck. There is no consensus on the appropriate treatment for the parotid LN metastasis in SCC because of the small number of reported cases. Furthermore, irradiation of parotid tail should be the norm in case of advanced SCC of tongue which has not progressed to the parotid lymph node.

Keywords: Squamous cell carcinoma (SCC), parotid, lymph node metastases, tongue cancer

Introduction

Parotid lymph node (LN) metastasis occurs most frequently from squamous cell carcinoma (SCC) of the head and neck^[1]. In SCC of the head and neck, metastatic involvement of the parotid gland is associated with a poor prognosis but the parotid LN remains an uncommon site of metastasis for oral squamous cell carcinoma^[2].

The management of tongue carcinoma is primarily surgical, with radiation also having an important role mainly in advanced disease, poor surgical candidates, unresectable disease, and importantly, as an adjuvant to surgery in some cases^[2]. Unless there is a clear contraindication for surgery or the tumor is unresectable, surgery should be offered as primary treatment for tongue squamous cell carcinoma. The ultimate goal of treatment is complete cure while minimizing therapy sequela and preserving functionality^[2].

Surgery is generally the treatment of choice for recurrent cancer because it offers a better prognosis than other therapies if the cancer is resectable^[9].

Careful follow-up is necessary to detect recurrent primary tumors at a stage when surgical treatment can still be performed. Tumor cells in OTSCC often metastasize to cervical lymph node levels Ia and IIa^[10].

In general, early-stage tongue carcinoma (T1 or T2) can be treated successfully with surgery^[2].

Materials and Method

The following observational study focuses on determining outcome and recurrence together in patients undergoing high neck dissection, resection of tail of parotid and concurrent lymph nodes.

We reviewed the records of 110 patients with oral carcinomas who had undergone neck dissections between April 2017 and December 2019.

Results and Observations

The above 110 patients who underwent neck dissections out of which high neck dissection, resection of tail of parotid along with its lymph nodes was undertaken on 86 patients. 24 patients were not subjected to high neck dissection in view of localized disease and negative level I, II & III nodes. Patients were followed up over a 2-year period.

Recurrence was found in 14 patients who underwent high neck dissection out of the 86 in total and in 16 patients who did not undergo high neck dissection out of the 24 in total.

Discussion

Parotid LN metastasis is rare in SCC patients, especially at the initial presentation^[7]. Due to this extremely low incidence, and because of the risk of facial nerve injury, dissections of

unusual site metastases of the neck have been rarely performed during the initial treatment of SCC of tongue^[7]. On the other hand, it was reported that metastasis to the parotid LNs should be considered in patients with SCC of tongue and that because small numbers of LNs or small tumor extensions infiltrating the surrounding healthy tissue are often not palpable, resection of the parotid gland tail is warranted during the initial neck dissection^[5]. At the very least, irradiation of parotid tail should be the norm in case of advanced SCC which has not progressed to the parotid lymph node^[6].

Olsen *et al.*'s study of 12 cases of oral and or oropharynx SCC with metastasis to the parotid showed that metastasis to the intraparotid LNs could occur, that the inferior parotid nodes were most commonly involved and that substantial cervical metastases were often observed^[6]. In that report, parotid LN metastasis was located in the inferior parotid node in 7 cases, multiple superficial nodes in 3 cases and in both deep and superficial nodes in 2 cases^[8].

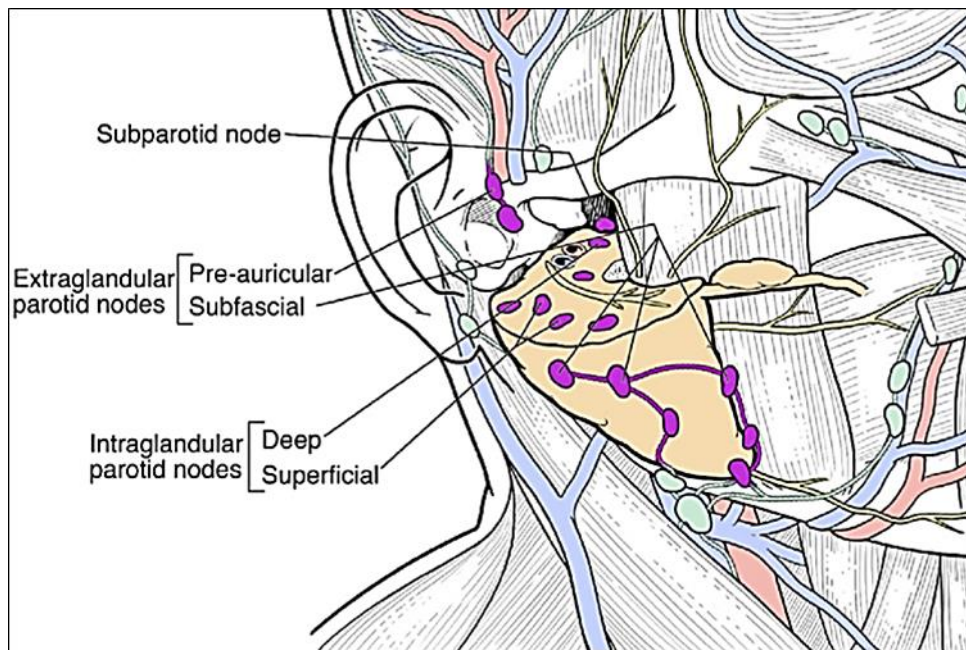


Fig 1: Showing parotid LN metastasis

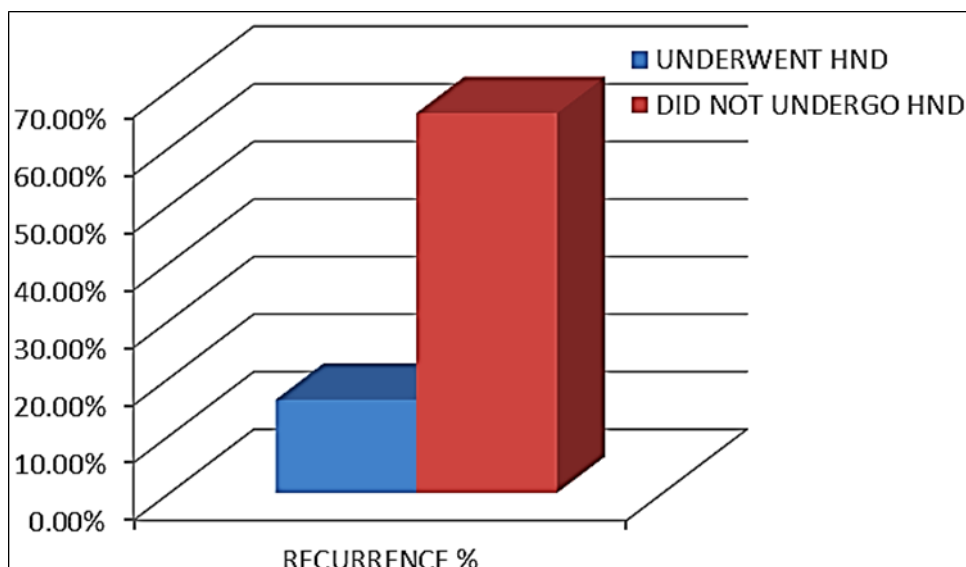


Fig 2: Showing recurrence %



Fig 3: Presentation of Parotid Lymph node metastasis in advanced OSCC

Conclusion

Patients undergoing high neck dissection show a recurrence rate of 16.2% as opposed to patients not undergoing high neck dissection showing a recurrence rate of 66%.

Metastasis of the parotid LN was observed to be associated with a poor prognosis in SCC of the head and neck. There is no consensus on the appropriate treatment for the parotid LN metastasis in SCC because of the small number of reported cases. Furthermore, irradiation of parotid tail should be the norm in case of advanced SCC of tongue which has not progressed to the parotid lymph node.

Hereby the study irrefutably concluded the importance of high neck dissection even in patients of localized carcinoma tongue of all subtypes. Even if high neck dissection initially would seem like overtreatment in patients with seemingly localized Carcinoma tongue, in absence of meaningful, accurate and reliable way to detect micro-metastasis in lymph nodes, high neck dissection with removal of tail of parotid and concurrent lymph nodes should be the norm rather than exception, irrespective of nodal status and stage of disease.

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