



## Prophylactic neck dissection in cN0 – SCC of Tongue

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### Abstract

*Squamous cell carcinoma of tongue has a higher predilection for lymph nodal metastasis<sup>(1)</sup>. Diagnosis of SCC of Tongue is by biopsy from tumor site, cytology from the lymph nodes, laryngoscopy, CT neck, and MRI<sup>(2)</sup>. The management of N0 neck is controversial. The aim of this study is to evaluate the rate and site of occult metastasis and its correlation with characteristics of the primary lesion in tongue. This is a study done over 2 yrs. All patients with anterior 2/3<sup>rd</sup> of tongue with cN0 are included.*

*40 cases were included in the study. Occult metastasis are seen in 15 cases (37%), of which 4 cases had multiple levels of nodes metastasis. Extracapsular spread was also seen. Due to the lack of any investigations to find out N+ status in neck and similarity in disease free status between treated pN+ and N0 patients there is requirement for newer techniques in diagnosis of nodes. Tumor thickness should also be considered as a factor in treatment of early tongue cancers.*

**Keywords:** *Tongue cancer, SCC of Tongue, prophylactic neck dissection, diagnosis, biopsy, lymph nodal metastasis, node status, radiotherapy, Modified neck dissection, new techniques.*

### Introduction

Oral cancer is one of the leading cancers in India. Malignancies of the tongue represent one of the most considerable management challenges because of the adverse effects of treatments on oral and pharyngeal function, the quality of life, and poor prognosis of advanced disease. Squamous cell carcinoma is the most common malignancy of the tongue.

Neck metastasis is the most important prognostic indicator in oral cancers. Based on this demonstrated fact, the management of neck metastasis in tongue cancers is one of the most important aspects of treatment<sup>(3)</sup>. However, the

role of prophylactic neck dissection has been a matter of discussion since its introduction<sup>(4)</sup>.

The Objectives of this study are

- To assess the benefit of prophylactic neck dissection in cN0 Tongue cancers.
- To assess the role of tumor thickness as a guide for neck dissection.

### Methods

An institutional-based study conducted over a period of 2 years at NRI Medical College and General Hospital, Mangalagiri. Diagnosis is confirmed by the wedge biopsy from tumor site.

**Inclusion Criteria**

- All cases of SCC of anterior 2/3<sup>rd</sup> of tongue with cN0.

**Exclusion Criteria**

- Patients with posterior 1/3<sup>rd</sup> of tongue malignancies.
- Patients with lymph node metastasis.

Total of 40 cases were studied. In all the cases, wide excision of the primary tumor was done. For the cases with tumor thickness less than 4mm, follow up was done for 6 months. For the cases, with tumor thickness more than 4mm, modified neck dissection was done in second sitting.

Among the cases for whom modified neck dissection was done, for pathological negative nodes, follow up was done. For pathologically positive node cases, radiotherapy was advised<sup>(5)</sup>.

**Results**

Based on the tumor thickness, number of cases

	Tumor thickness	Number of cases	Percentage
1	<4mm	16	40%
2	>4mm	24	60%

Of these 24 cases with tumor thickness>4mm, MND was done.

Node pathological status	Number of cases	%
Node +ve	15	62%
Node -ve	9	38%

Occult metastasis were identified in about 37% of the total 40 cases. This study suggests the role of protective effect of elective neck dissection in patients with early Tongue cancer.

**Discussion**

In Squamous cell carcinoma of Tongue, lymph node metastasis is an important prognostic factor. Incidence of neck metastasis in Tongue cancer is around 34-50%<sup>(6)</sup>. The identification of the patients at risk of metastasis helps to improve the treatment strategies. The accurate approach in diagnosing nodal metastasis can be obtained by histopathology and imaging modalities.

Management of N0 neck is a matter of discussion since its origin. Our study establishes the benefit of elective neck dissection in management of cN0 Tongue cancers. The disease-free status and subsequent quality of life improves comparatively to the node positive Tongue cancer patients.

**Conclusion**

The incidence of tongue cancer had seen rapid increase in the last decades. It is important to validate the results of the most recent studies applying new technologies such as PET-CT, sentinel lymph node biopsies in large populations and design studies comparing the strategies to define which is the best diagnostic and treatment approach.

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