



STUDY ON CERVICAL NODE METASTASIS IN CARCINOMA TONGUE

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ABSTRACT **Aim & objectives:** The aim of this study is to identify the pattern of neck node metastasis in tongue carcinoma patients. **Materials And Methods:** In total, 70 patients, diagnosed as tongue carcinoma by biopsy were included with no other history of other primary malignancies and who were not undergoing neoadjuvant concomitant chemo-radiotherapy or radiotherapy before primary resection were selected for analysis. **Results:** Males have higher rates of incidence; clinically most of the nodes go undiagnosed leading to false negative values. Neck node levels II are most commonly involved. Supraomohyoid neck dissection is the most commonly done for nodal stages N1 and N2, with radical neck dissection can be done for N3 and N4 stages. **Conclusion:** Neck node metastasis is directly related to stage, size and metastasis. Neck dissection with negative margins confirmed through histopathology gives a better oncological outcome with good prognosis.

KEYWORDS :

INTRODUCTION

Tongue carcinoma is one of the most common carcinoma throughout the world and in India. Tongue has a complex anatomy and vasculature which leads to increased spread of malignant cells to distant sites making it difficult for resection and prognosis. The overall prognosis of tongue carcinoma is relatively poorer compared to other sites of oral cancers. Carcinoma of tongue of stages T2 to T4 undergo elective neck dissection because of higher incidence of nodal metastasis not identified clinically.

Tongue cancers commonly spread to lymph nodes in neck, which acts as a predictive factor in the prognosis and outcome. Neck dissection and lymphadenectomy in cases of tongue carcinoma helps in identifying the pattern of disease survival and prognosis.

Aim of the study is to identify the patterns of cervical lymph node metastasis in patients undergoing neck dissection in all diagnosed cases of tongue carcinoma.

Methodology:

This is a prospective analytical study of 70 patients undergoing primary resection along with neck dissection in Dept. of Surgical Oncology in NRI Medical College, over 6 months from January 2021 to June 2021.

Inclusion Criteria:

Patients aged between 10 to 80 years, Patients willing to participate in study. Patients with histopathological diagnosis of tongue carcinoma prior primary resection.

Exclusion Criteria:

Patients denied consent for surgery, Patients with recurrent tumour, history of neoadjuvant chemo or radiotherapy, patients with other primary tumours other than the tumour in study are excluded. Patients with advanced carcinoma with obvious distant metastasis are excluded from the study.

Demographic, clinical, surgical and pathological data are collected from every patient and analyzed and results are obtained.

Analysis is done with SPSS version 13 and p value <5% is taken as significant.

RESULTS:

Out of 70 patients in the study, aged from 25 to 80 years (mean age of 52.6) 53 are male, 17 are female with a ratio of 3.1 : 1. The neck node metastasis in patients are cN0 (n= 36, 51.46%), pN0 (n=42,60 %), pN+(n=28,40%).

All the patients underwent primary resection of the TUMOUR and along with neck dissection. TUMOUR stage and nodal status is

mentioned in the table. Level II is the most common level to be involved. Neck dissection was carried out with no positive margin status. Supraomohyoid neck dissection was done in 19 cases out of which 15 has pN0, 3 have pN1 and 1 pN2b stage.

Modified neck dissection with sparing of internal jugular vein is done in total 35 cases (n=23-pN0, n=5 – pN1, n=1 – pN2a, n=6 – pN2b). On histopathology only 1 patient has positive bilateral nodal involvement for which bilateral modified neck dissection is done. Patients with TUMOUR size less than 3mm has 16.66% incidence of positive nodal metastasis, whereas patients with TUMOUR size greater than 3mm has 42.85% incidence of nodal metastasis.

	pN0	pN1	pN2A	pN2B	pN2C	pN3	%
T1	10	3	0	1	0	0	28.57
T2	24	2	1	2	1	0	20
T3	3	2	1	3	0	1	70
T4	5	3	2	6	0	0	68.75

Variable	Frequency	Percentage (%)
Sex		
Male	53	75.72
Female	17	24.28
TUMOUR Status:		
T1	13	18.57
T2	32	45.72
T3	16	22.85
T4	9	12.86
Clinical node status:		
cN0	36	51.42
cN1	25	35.71
cN2b	0	0
cN2c	6	8.58
Pathological node status:		
pN0	42	60.00
pN1	10	14.29
pN2a	4	5.73
pN2b	12	17.14
pN2c	1	1.42
pN3	1	1.42

Neck Dissection	pN0	pN1	pN2A	pN2B	pN2c	pN3	TOTAL
Level 1 clearance	1	0	0	0	0	0	1
SOHND	15	3	0	1	0	0	19
MND	23	5	1	6	0	0	35
RND	0	2	2	4	0	1	9
B/L SOHND	0	0	0	0	0	0	0
I/L MND + C/L SOHND	3	0	0	1	0	0	4
B/L MND	0	0	1	0	1	0	2

DISCUSSION:

Tongue carcinoma is one of the most common oral cavity cancers

which can have a good prognosis if detected early and staged correctly. Nodal metastasis when not identified at earliest leads to poor outcome. Neck metastasis in oral carcinoma varies from 35% to 50%^{1,2}.

Lymph node is a strong predictor of prognosis of oral cavity cancers¹. Studies showed that tumour size and stage are direct predictors of nodal metastasis³. Clinical examination is not a reliable method to identify neck nodal metastasis in cases of tongue carcinoma. Ultrasound has better sensitivity and specificity in identification of neck nodes and staging of the tumour. Takashima et al (1997)⁴ demonstrated ultrasound guided fine needle aspiration to have 93.7% diagnostic accuracy. Surgery on the primary tumour often modifies lymphatic drainage, so sentinel node biopsy is useful when primary tumour and neck are operated at the same time⁵. Ipsilateral level I, II, III nodal dissection is gold standard method to identify nodal metastasis.

Presently modified radical neck dissection is the standard surgical care for resection of neck metastasis in all cases of tongue carcinomas. Supraomohyoid dissection can be the ideal surgery of choice for all N0 cases. Shear et al. in nearly 900 patients found grade and size as predictive factors of lymph node metastasis⁶. Byers et al. found that an increasing tumour grade predicted lymph node metastasis⁷. Sparano et al. and Lim et al. also showed positive correlation between grade of the TUMOUR and lymph node metastasis^{7,8}.

Studies showed that TUMOUR thickness as a better reliable factor for lymph node metastasis. This is backed by the fact that increased tumour thickness has higher lymphatic and blood supply leading to increased incidence of metastasis.

Bilateral metastasis was rare and a single case was observed in our study. Contralateral metastasis can be considered as occult metastasis'. Margin et al considered it to have poor prognosis.

It is clear from the study that clinical examination is not enough in the staging and identification of neck metastasis as it has high false negative rates. Ultrasound and other imaging techniques such as CT do not offer much evidence of metastasis. Intraoperative techniques such as instillation of dye or frozen sections have better rates in diagnosis but not feasible.

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