

A COMPARATIVE STUDY OF SELECTIVE LYMPH NODE DISSECTION VERSUS RADICAL LYMPH NODE DISSECTION OF ORAL CAVITY MALIGNANCYSonia Moses¹, Fareed Khan², Siddharth Dubey³**HOW TO CITE THIS ARTICLE:**

Sonia Moses, Fareed Khan, Siddharth Dubey. "A Comparative Study of Selective Lymph Node Dissection versus Radical Lymph Node Dissection of Oral Cavity Malignancy". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 50, June 22; Page: 8735-8739, DOI: 10.14260/jemds/2015/1265

ABSTRACT: PURPOSE: The study focuses on the lymphatic metastasis pattern in oral cavity cancer with the incidence of various lymph node groups' involvement. To compare the selective lymph node dissection and radical lymph node dissection on overall prognosis of the malignancy and the failure rates with and without radiotherapy. **METHODS:** The study consisted of 60 cases of oral cavity carcinoma (Includes ca-buccal mucosa, ca-lip, ca-tongue, ca-alveolus) registered in M. Y. Hospital Indore between January 2007 to December 2014. **RESULT AND CONCLUSION:** For early lesions selective neck dissection is very effective and recommended, but for N2b and beyond lesions radical neck dissection is better. Post-operative radiotherapy does help in reducing local and regional failure rates. Thus the management should be highly individualised and cafeteria approach should be offered to the patients, explaining the risks and benefits.

KEYWORDS: Oral cavity malignancy, Radical lymph node dissection, Carcinoma tongue, Carcinoma lip, Carcinoma alveolus.

INTRODUCTION: Cancer, though as old as the history of medicine, still remains the worldwide problem and as an enigma for the modern medical science.

One of the commonest site in the body affected with carcinoma is the oral cavity and oropharynx. The single most important factor affecting prognosis for patients of oral cavity cancer is the stage of the disease at the time of initial diagnosis and treatment. Patients who present with tumours localised at the primary site without dissemination to regional lymph node enjoy an excellent prognosis. On the other hand, once dissemination to regional lymph node takes place, the probability of 5-years survival, regardless of the treatment rendered reduces to one half.

Thus management¹ of cervical lymph nodes becomes a vital component of the treatment modality of cancers of head and neck. Clinical evaluation begins with thorough palpation of all nodes. CT Scan is adequate adjuvant, especially for paratracheal and retropharyngeal nodes.

Treatment includes modification of classical neck dissection. Modified radical neck dissection refers to removal of neck lymphatics with conservation of non lymphatics structures. Selective neck dissection refers to preservation of lymph node groups commonly uninvolved. Treatment plans must be individualised for each patient based on primary tumour and predicted levels of lymph node metastasis.

AIMS AND OBJECTIVES: To study lymphatics metastatic pattern along with the incidence of lymph node involvement in oral cavity malignancy.

To compare selective lymph node dissection and radical lymph node dissection on the overall prognosis and to study the failure rates.

ORIGINAL ARTICLE

MATERIALS AND METHOD: The study consists of 60 cases of carcinoma of oral cavity registered with M. Y. Hospital Indore between January 2007 to December 2014. All the patients had undergone surgical treatment for their primary lesion with cervical lymph node dissection with or without radiotherapy. After completion of the treatment, all were followed up for a minimum of six months or until recurrence was detected. Patients were categorised as per the TNM classification and treatment was given as deemed appropriate.

STATISTICS:

Total number of cases: 60.

Total number of recurrence: 15.

Total number of patients undergoing selective neck dissection: 39.

Total number of patients undergoing radical neck dissection: 21.

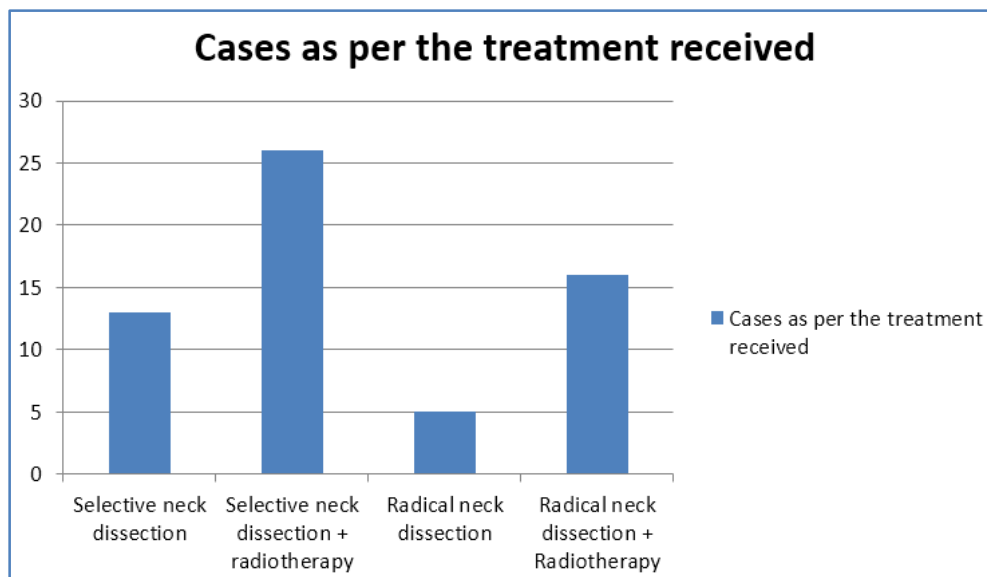
Total number of patients receiving radiotherapy: 42.

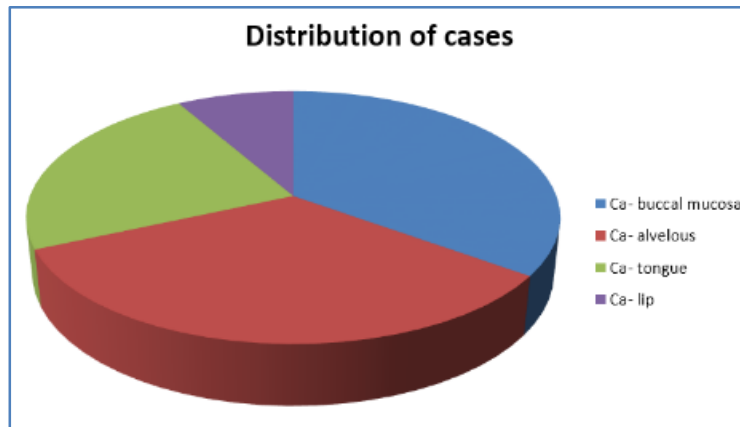
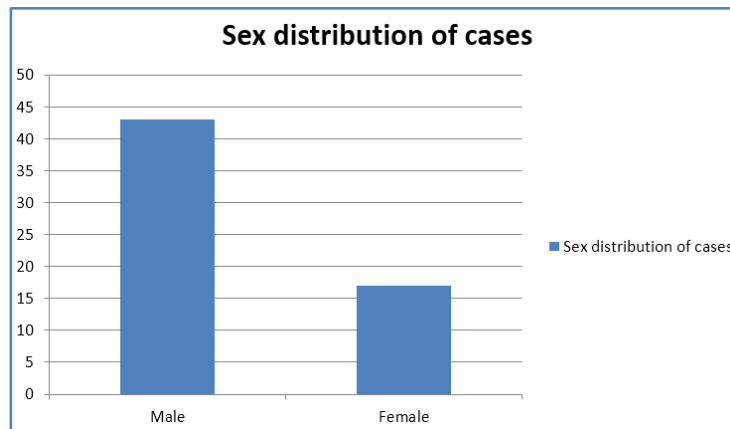
Sex Prevalence	
Males	43(71.66%)
Females	17(28.33%)

Table 1

Distribution of cases	
Ca-buccal mucosa	21(35%)
Ca-alveolus	20(33.34%)
Ca-tongue	14(23.34%)
Ca-lip	05(8.34%)

Table 2





DISCUSSION: Carcinoma of the oral cavity is one of the commonest cancers in India, comprising about 35% of all cancers in men and about 18% in women. The single most important factor in the treatment of patients with oral malignancy is the status of cervical lymph nodes.

Dissemination² of metastatic cancer to regional lymph nodes from primary sites in the upper aerodigestive tract occurs in a predictable and sequential manner. Thus all regional lymph node groups are usually not at risk of nodal metastasis initially from any primary site in the absence of grossly palpable metastatic lymph nodes. For primary tumours in the oral cavity, the regional lymph nodes at highest risk for early dissemination are limited to level I, II, III. Anatomically these are lymph nodes contained within supraomohyoid triangle of the neck.

Skip metastasis to level IV and V in the absence of metastatic disease at level I, II, III is very rare.

Levels of Lymph Nodes:

- Level I: Submandibular and submental nodes.
- Level II: Upper jugular nodes.
- Level III: Middle jugular nodes.
- Level IV: Lower jugular nodes.
- Level V: Posterior triangle nodes.

Staging System:

Nx- Cannot be assessed.

N0-No regional lymph node metastasis.

N1-Single ipsilateral lymph node <3 cm in size.

N2a-Single ipsilateral lymph node ≥ 3 cm but <6 cm in size.

N2b-Multiple ipsilateral lymph nodes, none more than 6 cm.

N2c-Contralateral or bilateral cervical lymph node, none more than 6 cm.

N3 -Any lymph node >6 cm in size.

Surgical Treatment Modalities Followed: Radical neck dissection: An en bloc clearance of all fibro fatty tissue including level I to V lymph nodes, parotid gland, spinal accessory nerve, internal jugular vein and sternocleidomastoid muscle.

Modified Radical Dissection³: Removal of level I to V lymph nodes but preservation of non-lymphatic structures.

Selective Neck Dissection: Certain lymph node groups are preserved while others are removed. It includes supraomohyoid dissection, lateral neck dissection, anterior neck compartment dissection and posterolateral neck dissection.

Extended Neck Dissection: Certain lymphatic or non-lymphatic structures not routinely included (Retropharyngeal lymph nodes, hypoglossal nerve, prevertebral musculature or carotid artery) have to be removed.

It can be observed that as the disease presents at an advanced stage more patients are subjected to radical neck dissection.⁴ The results of radical neck dissection with post-operative radiotherapy are the best in terms of loco regional control. Patients with same nodal stage clinically but different T stage can have different local as well as regional failure rates due to occult metastasis and pathological positive nodes.

CONCLUSION: Based on the study we conclude: Dissemination of metastatic cancer to regional lymph nodes from primary sites in the oral cancers occur in predictable and sequential pattern. For early tumours the highest risk nodes are Level I, II and III. Skip metastasis to level IV and V in the absence of level I, II and III is very rare.

For⁵ N1 and N2a disease, selective neck dissection is as effective as radical neck dissection with post-operative radiotherapy. For N2b and beyond the failure rate with selective neck dissection is slightly higher than with radical neck dissection.

Tumour size also has a prognostic role in the locoregional control, owing to the greater chance of occult metastasis in larger tumours and hence should be considered while selecting the type of neck dissection. Post-operative radiotherapy does help in reducing the locoregional failure rates with selective as well as with radical neck dissection.

However the management of the cervical nodes should be highly individualized and cafeteria approach should be offered to the patients, explaining the risks and benefits of the procedure.

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