

**Case Report**

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## Central Arch Commando, A Catholicon For Tongue Carcinoma In Decept Patient- A Case Report

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**Abstract**

Squamous cell carcinoma is the most frequently occurring malignant neoplasm of the oral cavity, common amongst tobacco and alcohol consumers, affecting individuals over 50 years of age. Various treatment modalities consist of chemotherapy, radiotherapy, surgery or a combination of the above. A case report of squamous cell carcinoma involving the tongue and the floor of mouth, with no deleterious habits, treated with central arch commando operation followed by reconstruction with pectoralis major myocutaneous flap and deltopectoral flap is presented.

**Key words-** Squamous cell carcinoma, tongue, floor of mouth, neoplasm, chemotherapy, radiotherapy.

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**INTRODUCTION**

**I**ncarcinomas are the second most common cause of morbidity and mortality in the world today after cardiovascular problems.<sup>1</sup> In India, Oral cavity is one of the leading sites of cancer, in either gender; amongst that SCC is the most common neoplasm. Oral cancer is the eleventh most common cancer globally.<sup>2</sup> Squamous cell carcinoma is defined as “a malignant epithelial neoplasm exhibiting squamous differentiation as characterized by the formation of keratin pearls and/ or presence of intercellular bridges” (Pindborg et al 1977). It represents more than 90% of all the Head and Neck carcinomas and affects mostly adult males, predominantly alcohol and tobacco users, between the 6<sup>th</sup> and 7<sup>th</sup> decades of life. The most affected sites in decreasing order are the tongue, oropharynx, lip, floor of mouth,

gingiva, hard palate and buccal mucosa.<sup>3,4,5,6,7</sup> Carcinomas on tongue and floor of the mouth are considered to have worst prognosis. The poor prognosis of these lesions were attributed to their advanced stages at the time of diagnosis. Most floor of the mouth (FOM) carcinomas commence within 2 cm of the anterior midline with appendages toward the gingiva and periosteum of the mandible cropping up even in early lesions. Treatment of SCC mainly consists of chemotherapy, radiotherapy, surgery, or a combination of the above modalities.<sup>8,9</sup> A case of SCC of tongue and floor of the mouth in 60 year old patient is presented. The case was treated with Central arch commando operation followed by reconstruction with Pectoralis major myocutaneous flap (PMMC) and Deltopectoral flap.

**CASE REPORT**

A 60 yrs old male patient reported in outpatient clinic of Prince Bijay Singh Memorial Hospital, Rajasthan in January 2015 with the chief complaint of swelling on left side of neck and associated pain since 3 months. The swelling was initially slow growing but after taking chemotherapy, it started increasing in size with pain radiating to the entire lower jaw. There was also symptoms of difficulty in swallowing but no difficulty in breathing. Patient denied any history of alcohol consumption or any other harmful habits. Extraoral examination revealed cervical lymphadenopathy with 4X3 cm fungating, exophytic mass at right level Ib and 4X3 cm neck node which is palpable, tender, fixed, hard, erythematous in nature.(Fig 1) Intraoral examination revealed a ulcerative growth involving the lower alveolus extending from the floor of the mouth and reaching upto left lower gingivobuccal sulcus. Second primary lesion was also present on right lower gingivobuccal sulcus with marked trismus. Biopsy was performed under local anaesthesia and histopathological examination revealed moderately differentiated squamous cell carcinoma of tongue and floor of the mouth. CECT scan was advised to confirm the extent of the lesion. The scan confirmed large ill defined heterogeneously enhancing soft tissue density mass involving the left lower alveolus, floor of the mouth with signs of malignancy. There was erosion of underlying mandible bone and medially the lesion is abutting tongue. The neoplasm was classified as T2N2bM0 (Stage 4) based on mouth cancer TNM classification criteria of UICC/AJC( American Joint Committee for Cancer Staging ) where T2 indicates tumour more than 2 cm but less than 4cm in its greatest dimension, N2b denotes metastasis in multiple ipsilateral lymph nodes, none more than 6 cm in greatest dimension and M0 denotes no distant metastasis. Preanaesthetic evaluation was done and surgery was planned under general anaesthesia. Central arch commando (combined mandibulectomy and neck dissection operation) was performed with partial glossectomy. Neck dissections of level 1 -4 on right side and type 2 modified neck dissection (Internal jugular vein and spinal accessory nerve preserving ) of left side was carried out.(Fig 2,3) Due to extent of the resection ,

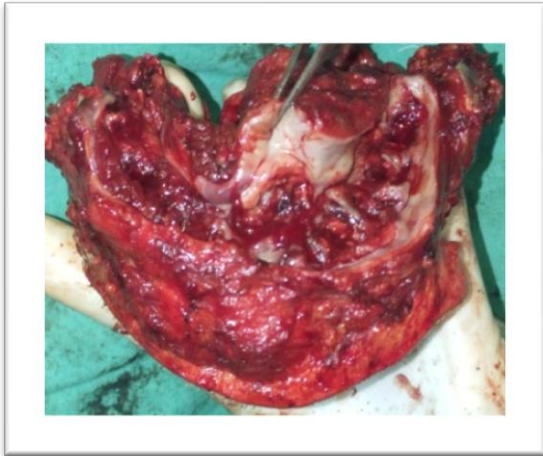
double flap reconstruction was carried out with PMMC flap and Deltopectoral flap.(Fig 4) A full thickness skin graft from extensor surface of right thigh was used to cover the donor site.(Fig 5) Tracheostomy for assisted ventilation and feeding gastrostomy was done to provide nutritional support to the patient.(Fig 6) This was followed by radiotherapy.(Fig 7) Suture was removed after 10 days and the patient was discharged after 15 days.Follow up was done till 3 months.



**Figure 1: Preoperative Profile**



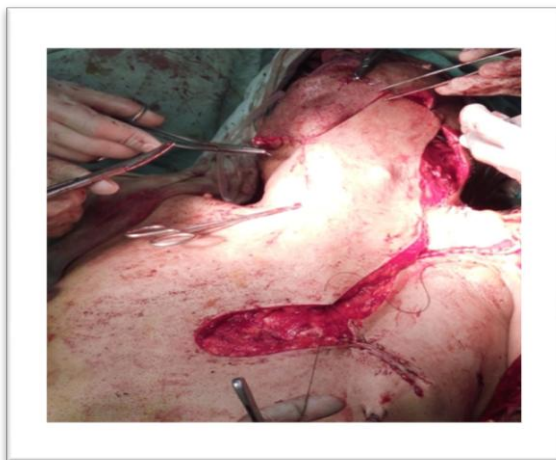
**Figure 2: Central Arch Commando Operation with partial Glossectomy**



**Figure 3: Excised tissue**



**Figure 6 : Feeding Gastrostomy From Stomach**



**Figure 4: Elevation of PMMC and Deltopectoral Flap**



**Figure 5: Denuded shoulder covered with Skin graft**

### DISCUSSION

Carcinoma of floor of the mouth accounts for 28-35 % of all the oral cancers. Oral carcinomas are more common in India than in western population which may be due to variation in the culture and habits.<sup>1</sup>It is more common in males than in females. Though many reasons are responsible for the causation in which tobacco and alcohol consumption top the list. They act synergistically in the causation of carcinoma .The vulnerability to the effect of irritants varies amongst the population which may be genetic, familial or acquired. It usually begins as a asymptomatic nodular or ulcerative lesion which in most cases are overlooked because of its painless nature and hidden location. Hence the patient presents himself during the advanced stages of the disease. Histopathologically, SCC is divided into 3 grades depending on the degree to which the tumor resembles the parent tissue and produces keratin. They are categorized as well-differentiated, moderately-differentiated and poorly differentiated. A well differentiated tumor is mature enough to closely resemble its tissue of origin, grows at a slightly slower pace and metastasizes later in its course.<sup>10</sup>The rate of regional cervical metastasis associated with carcinoma is high with 30 % of the patients having clinically positive nodes. The incidence of conversion of clinically negative neck nodes to positive neck nodes without neck treatment varies from 20 % to 35 %.<sup>5,6</sup> The first nodes to get involved are submandibular and subdiagastric nodes. Because of the rich lymphatic network of the tongue and floor of the mouth, the risk of development of lymph node metastases in these particular sites varies between 6% and 46%, even in early stages.<sup>11,12,13,14,15-17</sup> Lesions more than 1 cm

away from the midline present a low risk of contralateral metastases (7%), which was also concomitant with our case. In cases of lesions crossing the midline by less than 1 cm, the risk increases to 16% and reaches 46% in those where the crossing is more than 1 cm.<sup>12,17,18</sup> Multidisciplinary approach followed in the treatment of SCC of Head And Neck is complex and evolving. In the beginning of the Era, radiotherapy alone was considered as the standard approach in the treatment for locoregionally advanced resectable cases but now a day's chemotherapy is increasingly being incorporated in the treatment of SCC.<sup>19</sup> Radiotherapy alone is not the preferred treatment of choice if the lesion occurs in proximity to mandible because of risks of soft tissue and bone necrosis in addition to severe xerostomia . Even for advanced tumors, preoperative radiation therapy is not recommended because of risk of pathological fracture or osteoradionecrosis. It has been demonstrated that adding chemotherapy to radiotherapy, in both definitive and adjuvant preoperative settings, resulted in 12% reduction in the risk of death from SCC of head and neck but chemotherapy alone causes high risk of cancer recurrence and regional nodal metastasis.<sup>20</sup> Many patients even also complaint of mouth sores. This was also true in our case, in which the patient came back with recurrence of the lesion and regional nodal metastasis after taking chemotherapy alone. Some authors preferred concurrent chemoradiotherapy followed by surgery for completion of the treatment, for improved organ preservation but in our case initially the patient was not ready for radiotherapy and surgery.<sup>19</sup>

Small carcinomas of the floor of the mouth can be treated with Radiotherapy or surgery with the cure rates of 70-95%. Larger lesions require surgical intervention with reconstruction flaps. As there is associated invasion and infiltration of tumor into suprahyoid musculature or tongue, surgery with marginal or segmental mandibulectomy and partial or subtotal glossectomy, combined with radiation therapy should be the primary treatment of choice .The feasibility of marginal mandibulectomy depends on the vertical height of mandibular body.

## CONCLUSION

As squamous cell carcinoma is the most frequently occurring neoplasm in oral cavity, complete enucleation of the lesion followed by chemoradiotherapy should be the treatment of

choice for early stages of SCC to prevent recurrence of the lesion.

## REFERENCES

1. Khan ZU. An Overview of Oral Cancer in Indian Subcontinent and Recommendations to Decrease its Incidence.
2. More Y, D'Cruz AK. Oral cancer: Review of current management strategies. The National medical journal of India. 2013 May 1; 26(3):152-8.
3. National Institute of Cancer, Brazil, Ministry of Health (2007) Estimates 2008: cancer incidence in Brazil. INCA, Rio de Janeiro. (in Portuguese)
4. Wünsch-Filho V: The epidemiology of oral and pharynx cancer in Brazil. Oral Oncol.2002; 38, 737-746.
5. Marchioni DL, Fisberg RM, do Rosário M, Latorre DO, Wunsch V: Diet and cancer of oral cavity and pharynx: a case-control study in São Paulo, Brazil. IARC Sci Publ.2002; 156, 559-561.
6. Barnes L, Everson JW, Reichart PA, Sidransky D :World Health Organization classification of tumours: pathology and genetics of head and neck tumors. IARC Press, Lyon.2005; 168-174.
7. Mc Dowell JD : An overview of epidemiology and common risk factors for oral squamous cellcarcinoma. Otolaryngol Clin North Am.2006; 39, 277-294.
8. Rodgers LW, Stringer SP, Mendenhall WM, et al: Management of squamous cell carcinoma of the floor of mouth. Head Neck.1993; 15:16-21.
9. Panje WR, Smith B, McCabe BF: Epidermoid carcinoma of the floor of the mouth: surgical therapy vs combined therapy vs radiation therapy. Otolaryngol Head Neck Surg.1980; 88:714-720.
10. Tyagi N, Tyagi R. Squamous cell carcinoma (well differentiated): A case report. Journal of Dentistry. 2013 Apr 30;5(4):31-4.
11. . Teichgraeber JF, Clairmont AA: The incidence of occult metastases for cancer of the oral tongue and floor of the mouth: Treatment rationale. Head Neck Surg.1984; 7:15-21.

12. Dias FL, Kligerman J, de Sa GM, et al: Elective neck dissection versus observation in stage I squamous cell carcinomas of the tongue and floor of the mouth. *Otolaryngol Head Neck Surg.*1999;125:23-29.
13. Kligerman J, Lima, Soares JR, et al: Supraomohyoid neck dissection in the treatment of T1/T2 squamous cell carcinoma of the oral cavity. *Am J Surg.*1994;168:391-394.
14. Dias FL, Kligerman J, de Sa GM, et al: The risk of regional metastasis in early cancer of the oral cavity. Presented at the 1998 Combined Meeting Program of the ASHNS and SHNS, Palm Beach, FL.1998; May 14-16.
15. Di Troia JF: Nodal metastases and prognosis in carcinoma of the oral cavity. *Otolaryngol Clin North Am.*1972; 5:333-341.
16. Fu KK, Lichter A, Galante M: Carcinoma of the floor of the mouth: An analysis of treatment results and the sites and causes of failure. *Int J Radiat Oncol Biol Phys.*1976;1:829-839.
17. Kowalski LP, Medina JE: Nodal metastases: Predictive factors. *Otolaryngol Clin North Am.*1998; 31:621-638.
18. . Cunningham MJ, Johnson JT, Myers EN, et al: Cervical lymph node metastasis after local excision of early squamous cell carcinoma of the oral cavity. *Am J Surg.*1986;152:361-366.
19. Neoadjuvant chemotherapy or chemoradiotherapy in head and neck cancer Preetesh Jain, Prabhash Kumar, Vasanth Raghuvir Pai, Purvish Mahendra Parikh
20. . Pignon JP, Bourhis J, Domenge C; Design LMACH-NC Collaborative Group. Chemotherapy added to loco regional treatment for head and neck squamous-cell carcinoma: Three meta-analyses of updated individual data, Meta-analysis of chemotherapy on head and neck cancer. *Lancet* 2000;355:949-55.

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