



CARCINOMA TONGUE : AN EXPERIENCE FROM A TERTIARY CARE CENTER IN CENTRAL INDIA

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ABSTRACT **INTRODUCTION:** Cancer Of Tongue as well as buccal mucosa have been noted to be quite common in India, attributed to various causes and has varied clinicopathological features involving various subsites of oral cavity in advanced malignancy. Varied treatment modalities has been described in the treatment of carcinoma tongue. In view of the changing trends, we did a study to evaluate the practices followed in carcinoma tongue at our center

MATERIALS AND METHODS: Non randomized prospective observational study that was done on patients who presented with carcinoma tongue in our institution. Patient underwent metastatic workup and based on tumour board decision, were planned for surgery according to their disease burden. Surgery along with reconstruction, post op complications with adjuvant treatment and follow up noted and assessed

RESULTS: Most common decade involved was 41-50 years with 34 cases (33.66%). In the productive age group between the age of 21 years and 50 years we had 73 cases. Males were 82 cases (81.19%). 34% patients had growth in the left lateral aspect of the tongue, while 23% had complete involvement of anterior two third of the tongue. 25 patients (24.75%) presented in stage IVA, while 43 (42.57%) were in stage II with 35 patients (34.65%) patients had undergone Total Glossectomy + B/L MRND 2 and 33 (32.67%) underwent Hemi Glossectomy + MRND 2 with 50% of patients had pectoralis myocutaneous flap (PMMC) was used for the reconstruction of the defects and 20% with Free Radial Artery Forearm Flap (FRAFF). Most of the histopathology were squamous cell carcinoma and 10% had adenoid cystic carcinoma.

CONCLUSION: The mainstay of treatment of head and neck cancer is surgery and specially carcinoma tongue requires aggressive management due to involvement of adjacent subsites and subsequent morbidity. Multimodality treatment is the key in advanced malignancy. Lack of screening programmes leads to patient being presented with advanced malignancy requiring extensive and morbid surgeries.

KEYWORDS : Carcinoma Tongue, Glossectomy, Multimodality Treatment, Modified Radical Neck Dissection

INTRODUCTION

Carcinoma Tongue is one of the most common malignancy in India, since oral cavity is frequently been exposed to various carcinogenic agents, specifically tobacco, alcohol, betel nut, and human papillomavirus (HPV). The oral cavity is one of the common malignancy in India due to frequently been exposed to various carcinogenic agents, specifically tobacco, alcohol, betel nut, and human papillomavirus (HPV). Head and neck squamous cell carcinomas are known to be a biologically heterogeneous group of cancers involving various subsites and are considered to be a major source of cancer morbidity and mortality worldwide, especially in the Indian subcontinent.¹ Oral squamous cell carcinoma (OSCC) is an important source of morbidity and mortality worldwide with an incidence rate that varies widely by geographic location.¹ According to the reports of the World Health Organization (WHO), oral cancer ranks sixth among all malignancies worldwide.² Cancers of the tongue as well as buccal mucosa have been noted to be quite common in India, attributed to the local custom of chewing pan, betel leaf with tobacco.³ Several Indian studies have described the clinicopathological features of OSCC and highlighted specific sites in the oral cavity where the disease develops along with epidemiological causes for carcinoma tongue.⁴ Varied treatment modalities like surgery, radiation and chemotherapy is used in the treatment of carcinoma tongue. In view of the changing trends, we did a study to evaluate the practices followed in carcinoma tongue at our center.

MATERIALS AND METHODS

The present study was a non randomized prospective observational study that was done on patients who presented with carcinoma tongue at Department of Surgical Oncology, Sri Aurobindo Institute of Medical Sciences, Indore for the duration of two years. The study was done after obtaining a clearance from the institutional ethics board. Patient included in the study underwent biopsies and MRI neck, were counseled about

their disease burden, the treatment options that are available and the alternative treatments if any and underwent metastatic work up. Based on the decision of the tumour board, patients were included in the surgery underwent either partial, hemi, near total or total glossectomy along with neck dissections based on the disease extent and reconstruction either with pedicled or free flap was done.

RESULTS

During the study period that extended for two years, the following observations were done on a total of 101 cases. With regard to age, 20 and 60 years we had 74 cases (73.26%), the most common decade involved was 41-50 years with 34 cases (33.66%). In the productive age group between the age of 21 years and 50 years we had 73 cases. (Graph 1). Males were the predominant population affected with carcinoma tongue with 82 cases (81.19%). On evaluation of the clinical presentation, all the study subjects all cases presented with ulcero-proliferative growth. 34% patients had growth in the left lateral aspect of the tongue, while 23% had complete involvement of anterior two third of the tongue. 25 patients (24.75%) presented in stage IVA, while 43 (42.57%) were in stage II (Table 1).

35 patients (34.65%) patients had undergone Total Glossectomy + B/L MRND 2 and 33 (32.67%) underwent Hemi Glossectomy + MRND 2 with 50% of patients had pectoralis myocutaneous flap (PMMC) was used for the reconstruction of the defects and 20% with Free Radial Artery Forearm Flap (FRAFF) (Graph 2 and 3).

Post op complications were few, with flap necrosis being 12% and surgical site infection being 15%. Most of the histopathology were squamous cell carcinoma and 10% had adenoid cystic carcinoma. The minimum follow up was for 13 months and at the last follow-up all cases were found to be tumor free.

GRAPH 1 : AGE DISTRIBUTION IN THE STUDY SUBJECTS

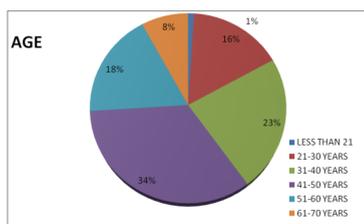
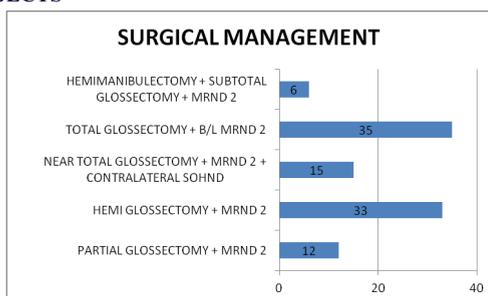


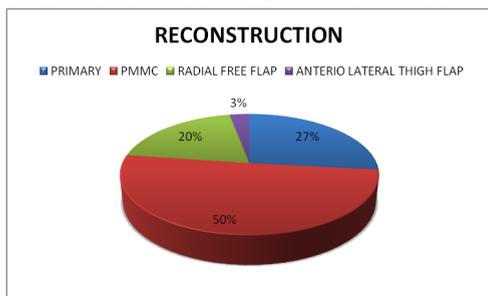
TABLE 1 : SITE AND STAGE OF THE SUBJECTS

Stage	Subjects	Percentage	Site	Subjects	Percentage
I	18	17.83%	Left Lateral	35	34.70%
II	43	42.57%	Right Lateral	26	25.70%
III	15	14.85%	Crossing Midline	17	16.90%
IV A	25	24.75%	Anterior Two Third	23	22.70%

GRAPH 2: SURGICAL MANAGEMENT IN THE STUDY SUBJECTS



GRAPH 3: RECONSTRUCTION OF THE DEFECTS



DISCUSSION

India is holds a top position in the epidemiology of oral cancers and accounts for one-fifth of all the cancers of the oral cavity. When the mortality rates are compared, 25% of all the death due to oral cavity disease occur in the Indian continent.⁽⁵⁾ Recent data has suggested that an annual basis approximately three million new cases are noted and half of them succumb to the disease.⁽⁶⁾

Among all sites within the oral cavity, carcinoma tongue holds a special place and most often is described as a separate clinical entity. It is estimated that oral malignancies most often affect those countries that have low and middle income, and 50% of these cancers occur in the South East Asian countries particularly in the Indian subcontinent.⁽⁷⁾ One of the major contributory factors for the development of cancer is tobacco chewing.⁽⁷⁾ The other risk factors that contribute in the pathogenesis of oral cancers are consumption of alcohol in very high amounts, infections specially HPV, sharp tooth, sexually transmitted diseases, chronic inflammatory conditions of the tongue. In our study we found that tobacco is major etiology for the carcinoma tongue and the individuals affected were majorly men (81%) of lower economic scale with most of them (73 cases) being at productive age group putting up the fair burden on their families.

Oral cancer has a long preclinical phase that consists of well-documented precancerous lesions. The precancerous lesions include homogeneous leukoplakia, nonhomogeneous leukoplakia, verrucous leukoplakia, erythroplakia, OSMF, lichen planus, and chronic traumatic ulcers⁽⁸⁾. Visual screening of the oral cavity has been widely evaluated for its feasibility, safety, acceptability, accuracy to detect oral precancerous lesions and cancer, and efficacy and cost-

effectiveness in reducing oral cancer mortality⁽⁹⁾

The recent changes and the understanding of the pathological process that are involved in the disease process have paved a way to discover newer modalities in the treatment of cancer. In cancer of the tongue, surgery remains the most important modality in the treatment management. The mainstay of current therapy for oral cancer is surgery and radiation treatment.⁽¹⁰⁾

The present day thought is that the best modality of management in each case needs to be individualized with expert opinion from various branches of oncology and tumour board comprising of rehabilitation department.

It is suggested that the cases need to be studied thoroughly by a team of experts that include competent individuals from the field of pathology, radiology, surgery, radiation oncology and medical oncology. The choice of modality depends on the location of the tumor, cosmetic and functional outcomes, age of the patient, associated illnesses, patient's preference, and the availability of expertise.

Most early-stage oral cancers can be locally excised or treated with radiotherapy, with no or minimal functional and physical morbidity. Elective neck dissection to remove lymph nodes may be considered in selected cases, such as patients with stage I tongue cancer and stage II cancers at other oral sites, who may be at high risk of microscopic but not clinically evident involvement of the neck nodes (N0). 44.5% of our patients underwent ipsilateral partial and hemi glossectomy with MRND 2 with minimal co morbidities.

Locally advanced tumors are aggressive, and locoregional treatment failure rates are high. A combined modality approach integrating surgery, radiotherapy with or without chemotherapy, and planned and executed by a multidisciplinary team is always preferred. In our study we found 39.6% of patients had presented in stage III and IVA were there is increased tumour burden and required near total or total glossectomy with neck dissection and contralateral SOHND. 6 patients required additional hemimandibulectomy as floor of mouth and mandibular cortex was eroded due advanced malignancy. Advanced malignancies reduces immunity of the patient making them prone for infections. Most these patients required PMMC and FRAFF cover in 50% and 20% cases respectively with fewer post op complications were few with flap necrosis being 12% and surgical site infection being 15%. Most of the histopathology were squamous cell carcinoma and 10% had adenoid cystic carcinoma. Post op these patients received adjuvant radio therapy based on the histopathological report. The minimum follow up was for 13 months and at the last follow-up all cases were found to be tumor free.

CONCLUSIONS

The mainstay of treatment of head and neck cancer is surgery and specially carcinoma tongue requires aggressive management due to involvement of adjacent subsites and subsequent morbidity. Multimodality treatment is the key in advanced malignancy for the improvement of survival along with the routine follow up. Lacking of screening programmes leads to patient being presented with advanced malignancy requiring extensive and morbid surgeries. Exciting challenges include improving success rates of current therapy, reducing the morbidity of treatment, and to select the most appropriate treatment.

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