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SQUAMOUS CELL CARCINOMA OF TONGUE AND FLOOR OF MOUTH -CASE REPORT IN A 72- YEARS OLD PATIENT

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ABSTRACT
Oral squamous cell carcinoma (OSCC) is a commonly occurring head and neck cancer. It has a high prevalence in certain parts of the world, and is associated with a high mortality rate. The major etiological factors leading to carcinoma of tongue are smoking, smokeless tobacco abuse and prolonged alcohol abuse. Mostly, surgery is the recommended therapy, with radiation and chemotherapy also being significant treatment modalities. The current case report is of a squamous cell carcinoma of the tongue and floor of mouth in a 72 years old female patient with a long history of smokeless tobacco use.

KEYWORDS:- Oral squamous cell carcinoma, tongue, floor of mouth

Introduction

Oral squamous cell carcinoma is the most common malignancy in the head and neck area comprising almost 90% of all malignancies in said area. The tongue, lip and the floor of the mouth, are common sites involved within the oral cavity. While the anterior two-thirds of the tongue is considered bona fide part of the oral cavity, the posterior third (base of tongue) is

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considered a component of the oropharynx. There are certain histo-pathological resemblances between tongue base and tongue carcinomas. Patients with advanced-stage SCCA of the tongue present poor prognosis, with 5-year survival rates constituting about 50% of the total cases irrespective of the recent advances in diagnosis and treatment planning of tongue malignancy[1]

CASE REPORT:

A 72 years old female patient reported to the OPD of DY Patil School of Dentistry,Navi Mumbai with a chief complaint of inability to eat, severely restricted tongue movement and severe burning sensation n since 2-3 years. Patient observed a small white growth on her tongue and experienced burning sensation on having food around 2-3 years back.The white growth progressively increased in size until it covered the dorso-ventral surface of the tongue.The intensity of the burning sensation got aggravated on taking spicy food. Patient also experienced gradual increase in restricted tongue movement which led to swallowing difficulties and eventual abnormal excessive weight loss[cachexia] with a progressive increase in restricted mouth opening . Patient isn't taking any medications or undergoing any treatment for the white growth on tongue at the time of reporting to the clinic. Lifestyle evaluation revealed 30-year use of smokeless tobacco Mishri as a dentrifrice. General examination of patient revealed ectomorph body type with wrinkly skin and non-competent lips and poor nutritional status. Submandibular lymph nodes and superficial jugular lymph nodes were discrete,movable and tender on palpation on left side while non-tender on right side. Posterior and pre auricular lymph nodes were discrete,movable and non-tender on palpation bilaterally.Vitiligo seen on right side of neck and multiple melanotic macules seen on face (figure 1)

FIGURE 1:-Extra-oral picture of the patient

- **Intra-oral examination on inspection revealed** ulcero-proliferative growth seen on the dorsal surface of the anterior 2/3rd of the tongue extending upto floor of mouth inferiorly on left side. Ill-defined borders, papillomatous surface & keratotic changes were noted on the ventral surface of tongue,floor of mouth whereas palate,uvula and buccal and lower labial vestibular mucosa showed blanching along as seen in figures below

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- On palpation,the inspectory findings were confirmed along with no temperature changes in surrounding area and no extra or additional growth as shown in the figures 2,3 and 4 below

FIGURE 2 shows ulcero-proliferative growth on dorsal surface of tongue

Figure 3:- Blanching on hard palate noted

Figure 4:-Blanching seen on vestibular and lingual buccal mucosa

Provisional diagnosis was given as carcinoma of tongue and floor of mouth TNM stage IV and patient was advised to cease habit immediately.Investigations advised were MRI tongue(plain& contrast).MRI Findings in T2 weighted and STIR showed an ill-defined altered signal intensity ulcero-invasive lesion involving anterior 1/3rd of left half of tongue appearing iso-intense to hyper-intense on sagittal section as shown in figure 5 below

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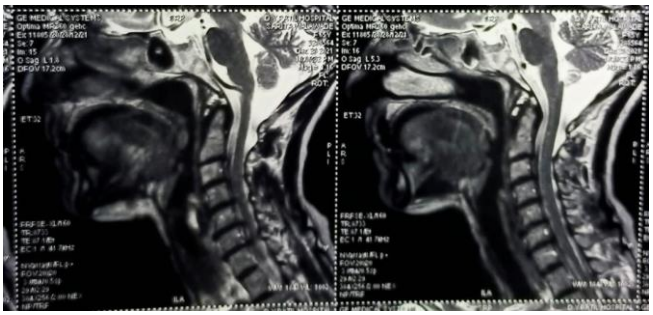

Figure 5 showing sagittal section of T2-weighted and STIR images from MRI of tongue
MRI(contrast study) showed heterogenous enhancements in coronal and axial sections as seen in the figures 6 & 7 below

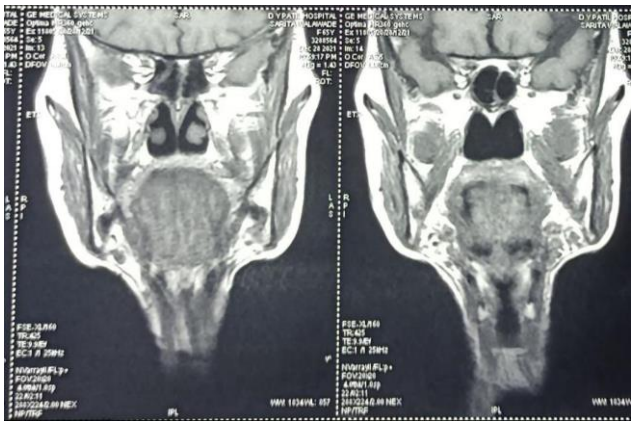

Figure 6 above showing coronal section of tongue MRI contrast study having heterogenous enhancement

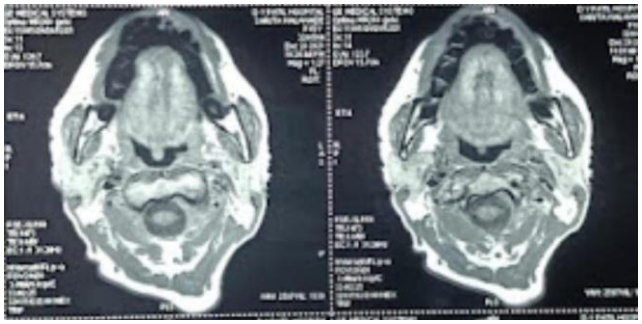

Figure 7 above shows axial section of Tongue MRI contrast study showing heterogenous enhancement

Final diagnosis was given as squamous cell carcinoma of tongue and floor of mouth TNM Stage 4 and patient was treated with subtotal glossectomy with bilateral modified radical neck dissection Biopsy findings confirmed well-differentiated squamous cell carcinoma of tongue.

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Figure 10: Post-Operative Pictures of the patient are given in figure 10 below

Post-surgery patient was referred to dental OPD for Pre-radiotherapy assessment and thereafter referred for a 42-day Radiotherapy schedule with tolerance dose at 5/5 at 60Gy/30# in the head and neck area bilaterally using Shrinking Field Technique. The patient successfully completed the treatment, tolerated the treatment dose with Grade II skin & mucosal toxicity, & was asked to report for follow-up with her oral surgeon and after 3 months post radiotherapy treatment at Bethany Hospital

Discussion:-

The significance of various imaging modalities in characterizing, staging the disease, and assessing the neoplasm's effect on surrounding structures is to be duly noted. The draining lymph nodes of the neck should be thoroughly assessed radiologically because locoregional spread of tumor via the lymphatics, specifically to the submandibular and jugulodigastric chains, is common. Treatment planning is done with precision and according to individual patient needs.This generally involves surgery as a primary step, with chemotherapy and radiotherapy having very significant roles[1]

From a functional preservation viewpoint, radiotherapy is a preferred mode of therapy in many institutions..[2]

Diagnosis of OSCC involves traditional biopsy, but salivary biomarkers could also be utilized for its early diagnosis.[3]

Inter patient variability exists and influences treatment outcomes greatly even though the efficacy of both chemotherapy and radiotherapy has been duly observed in literature, which suggests a role for genetic variation in the susceptibility to genotoxic exposures. These variations among patients are hypothesized to be due to polymorphism genes that greatly help in regulating the availability of the active drug metabolite or those other mechanisms responsible for DNA repair. [4]

The theory of multicentric origin of oral carcinoma otherwise known as FIELD CANCERIZATION rather than pin-pointing anomalous behaviour of a singular cell is vastly significant in treatment planning[5]

Heavy smoking,prolonged abuse of smokeless tobacco and chronic alcohol abuse are the most important risk factors in the development of carcinoma of tongue.[6] Nitrosamines, and

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polycyclic hydrocarbons are known carcinogens that constitute part of cigarette smoke while metabolism and eventual conversion of alcohol into acetaldehyde adversely influences DNA repair.[7,8] Though limited literature is available, other significant etiological agents of tongue carcinoma are chronic betel use, excessive radiation exposure, severely immunocompromised states over prolonged period, poor oral hygiene, and various genetic factors. Human papillomavirus (HPV) infection might also be a significant probable etiological factor in tongue carcinoma spread as per literature. Recently it has been seen that HPV-positive malignancy of the tongue has a tremendously improved response to therapy and improved survival when compared to HPV-negative tumor of the tongue[9]

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