

Early Invasive Carcinoma of Tongue-A Case Report

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Introduction

Squamous Cell Carcinoma (SCC) tongue shows 90% to 95% of all malignant neoplasm of the oral cavity, especially in posterolateral region. Older males (aged over 50 years) are more predominantly affected than females. The cause of SCC is multifactorial but mostly associated with tobacco use such as cigarette smoking, smokeless tobacco (snuff) and alcohol consumption etc. ^[1,2] So, a strong correlation is seen between an incidence of carcinoma intraoral and high consumption of tobacco and alcohol. ^[3,4,5,6,7] In more than half of the cases, patients visit to dentist very late thus diagnosed mostly at a late stage, consequently resulting a low survival rates and also lethal for the patient. Squamous Cell Carcinoma (SCC) cannot be diagnosed on a clinical basis alone; the diagnosis should be confirmed with histological findings also. ^[1,3] Here we are presenting a case report of 55 years

male patient with a ulceration on the right lateral border of tongue.

Case Report

A 55 year old male patient reported with a chief complaint of an ulcer on the right side of the tongue since 1 year. The Patient was asymptomatic 2 months back. He noticed an ulcerative growth on the right side of the tongue. The Patient also had a history of extraction of 46 seven month back due to trauma from occlusion at lateral border of the tongue.

On extra oral examination, the face appeared symmetrical. The overlying surface was of normal color and texture. On palpation, submandibular lymph nodes were tender & fixed (Figure 1).



Figure 1: Extraorally an asymmetry of the Face

On Intraoral examination a single ulceroproliferative growth was seen on the right lateral border of tongue measuring approximately 3cm x 2cm x 1cm in size extending anteroposteriorly from 1cm posterior from the tip of the tongue till the posterior two third of the tongue (43 to 47). On palpation, the lesion was tender, non-fluctuant with indurated margins. Protrusion of the tongue was also restricted. Incisional biopsy was performed and tissue was sent for histopathological examination (Figure 2).



Fig 2: Ulceroproliferative growth on the Right lateral border of the Tongue

Histopathology

Microscopic examination using H & E stain revealed hyperparakeratinized stratified squamous epithelium showing features of severe dysplasia like nuclear hyperchromatism increased nuclear cytoplasmic ratio and cellular and nuclear pleomorphism. There is distinct breach in the continuity of epithelium and few dysplastic cells are noted in the underlying connective tissue stroma. The underlying connective tissue stroma shows dense

inflammatory cells infiltrate chiefly lymphocytes with diffuse thick horizontal collagen fibers, dilated endothelial lined blood vessels. (Figure 3)

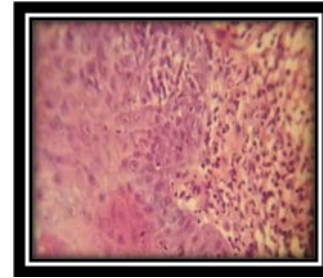


Figure 3: Breach in the basement membrane in the underlying Connective tissue stroma

Discussion

Squamous cell carcinoma is the most common malignancy affecting the oral cavity, the occurrence of oral squamous cell carcinoma has shown a rapid increase causing a high rate of morbidity and mortality. It occurs more frequently in males, generally in 5 to 6th decade of life and characterized by a chronic non healing ulcer which has a range of provisional diagnosis. The consumption of tobacco (smoked and smokeless form), betel quid, heavy drinking of alcoholic beverages and a diet low in fresh fruits, trauma and vegetables are the utmost risk factors for oral SCC. Consumption of tobacco has been main etiologic agent for OSCC. But due to the uniqueness of OSCC in younger patients, it is not clear concerning the etiological factors related to the development of OSC in them. Kuriakose *et al* in their study compared the role of etiological factors for OSCC tongue in young and older individuals and concluded that OSCC in younger patients was associated with fewer etiologic factors. Genetic factors have also been shown to have a crucial role in occurrence of OSCC. Few of the conceivable factors suggested are: genetic predisposition, feeding habits, immunodeficiency states, previous viral infection and occupational exposure to the carcinogenic

factor, socioeconomic condition, oral hygiene and trauma.^[8]

Current studies have shown an advancing trend for appearance of OSCC in younger individuals. The study conducted by Atual *et al* reported an advance of percentage of tongue cases of OSCC in young adults from 3% annually from 1953 to 1962 to 7% annually during 1983 to 1992. Tongue was the predominant site followed by buccal mucosa, lips and floor of mouth. In our case the site of occurrence of OSCC was right lateral border of tongue and appeared as an ulcerative lesion and had history of extraction of 46 seven month back due to trauma from occlusion at lateral border of the tongue.^[9]

The illuminating factor in the present case was the history of chronic trauma due to sharp edges of the broken carious lower first molar which may be deliberated as one of the possible mechanism of his cancer of the tongue. It has been documented in the literature that chronic mechanical trauma due to sharp remaining teeth, badly fitting dentures or unsuitable denture-bearing tissue, less than ideal fillings and loose anchoring attachments in the cause of oral squamous cell carcinoma. Monkman *et al* accomplished a review of the literature relating cancer to trauma and establish no documentation to suggest that single uncomplicated trauma can cause cancer. Although they concluded that trauma in association with different factors may act as a co carcinogen and that there was sufficient data suggesting that metastatic spread of malignant tumors can be influenced by trauma.^[9]

Myers *et al* in their study reported similar results of gradually increase in the occurrence of OSCC tongue in younger adults during the past 25 years. This prompt increase in the incidence of OSCC, chiefly in younger individuals is implicated to various inter-related aspects such as lifestyle factors including chronic usage of tobacco in smoked and smokeless forms, alcohol

consumption as the habit or as social drinking, smoking and nutritional factors. Genetic factors have also been shown to have a predominant role in the occurrence of OSCC. This detection of OSCC in younger individuals might be also due to advanced awareness between the general public as well as enhanced diagnostic aids in current time. Kuriakose *et al* correlated the role of risk factors for OSCC tongue in young and older individuals and concluded that it was associated with few etiologic factors. Sankaranarayanan *et al* compared the percentage of patients without the habit of tobacco consumption in younger and older individuals and observed that 82% of patients were below the age of 30 years and only 10 % of patients were above 30 years of the age who did not have a habit of usage of tobacco.^[8]

Treatment of squamous cell carcinoma of tongue remains chiefly surgery, with adjuvant radiotherapy added for increased stage disease or in patients at the possibility of local-regional failure. The accomplishment of a clear resection margin is crucial because survival is nearly related to resection regardless of any succeeding therapy the patients may receive.^[10]

Conclusion

Oral cancer occurring in a young adult is uncommon but nevertheless should always be considered such patients present with sharp tooth will produce ulceration particularly in the high-risk sites of the tongue. Various studies suggested that oral cancer in younger patients is genetically more aggressive with a poor prognosis than the disease in an older individual. By immediate diagnosis and treatment strategies, the lifespan of these patients may be extended further.

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