



Bilateral Representation of Oral Squamous Cell Carcinoma in a Male Patient: An Uncommon Presentation

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ABSTRACT

Introduction: Oral Squamous Cell Carcinoma (OSCC) is the most common malignancy of the oral cavity. It affects the epithelial tissue and is associated with tobacco use in majority of the cases. Traditionally, this malignancy was found in elderly population age and most commonly seen unilaterally. But, bilateral malignancies are a rare presentation in the oral cavity which highlights the **field cancerization** of whole oral cavity due to long term deleterious habit and also **delay in diagnosis** and treatment.

Case Presentation: Here we present a case of 52-year-old male with no significant medical history but a long term chronic history of chewing smokeless tobacco with betel nut who reported to us, biopsy already done within a span of 3 months at two different hospitals in both right and left buccal mucosa, detected as well differentiated squamous cell carcinoma.

Clinical Discussion: The majority of the case report emphasises the relevance of simultaneously developing bilateral malignancies in a patient who had a history of consuming smokeless tobacco along with betel nuts. As SCC is not very painful to start with, patient did not feel the necessity of visiting to the Doctors and delayed any definitive treatment within months of each other. No proper follow up, negligence lead to **field cancerization** and **delay in diagnosis** results in poor prognosis of the case.

Conclusion: We need to be careful and watchful about oral lesions particularly malignancy by the way of proper follow up and counselling.

Key Words: Bilateral Oral Squamous Cell Carcinoma, Field Cancerization, Delay in Diagnosis.

Highlights

- Oral Squamous Cell Carcinoma is one of the most prevalent malignancies in the world.
- The case presented is a bilaterally occurring simultaneous OSCC of the buccal mucosa in a 52-year-old Male patient.
- This is especially significant because bilateral malignancies occurring synchronously are an uncommon presentation in the oral cavity.
- Detecting and treating bilateral primaries timely is of utmost importance for better prognosis in view of surgical complications.

I. INTRODUCTION

Worldwide, Oral Squamous Cell Carcinoma is the sixth most common malignancy in men and accounts for approximately 5% of malignant tumors in the population of developed countries. However, in parts of Southeast Asia, head and neck cancer is the most common malignancy, accounting for up to 50% of malignant tumors. Oral Squamous cell carcinoma is the most common cancer in India which provides almost one third of the total burden seen worldwide [1]. The increasing incidence of oral cancer is a major concern of poor community health in the country [2]. Most of the cases in India are reported at an advanced stage as compared to western countries which results in poor prognosis [3]. Tobacco consumption both in the form of smoking and smokeless are the major causes and risks associated with oral Squamous cell carcinoma. Bidi smoking and alcohol consumption lead to higher risk of development of oral cancer [4]. The continual use of tobacco in various forms such as gutkha, mawa, khaini, hookah, bidi etc. is a major cause of tumour development in both young and adult population [5].



In general, the commonest age for development of Oral cancer in India was 5th decade of life. Buccal mucosa and gingivobuccal sulcus are the most common sites and smokeless tobacco the most common factor [6]. It has been observed in recent times that the age of detection of oral Squamous cell carcinoma is decreasing and now it is increasingly occurring in younger individuals in their twenties and thirties. This is emphasized in the case presented here. Lack of awareness among young individuals and early start of oral deleterious habits play a big role in the occurrence of Squamous cell carcinoma in the young.

II. CASE REPORT

A 52-year old male patient reported to Oral Medicine and Radiology department of Burdwan Dental College and Hospital with a chief complaint of ulceration of mouth for last 6 months. He had a chronic history of chewing smokeless tobacco with betel nut since 20 years. He had no significant medical history. On clinical examination, we found ulceroproliferative lesions involving right and left buccal mucosa with surface granularity, indurated border and rolled out margin. Patient had 2 biopsy reports of 2 sides from 2 different hospitals within a span of 3 months of each other.

Histopathology report of biopsied specimen from right buccal mucosa revealed well differentiated Squamous cell carcinoma (As per H/P report from NRS MCH on 05.06.2023)

And histopathology report of biopsied specimen from left buccal mucosa also revealed well differentiated Squamous cell carcinoma (As per H/P report from IPGMER & SSKMH on 06.09.2023)



Figure 1:-Extraoral Picture.



Figure 2:- Ulceroproliferative lesion with granular surface, indurated border and rolled out margin was present on the left buccal mucosa.



Figure 3:- Ulceroproliferative lesion with granular surface, indurated border and rolled out margin was present on the right buccal mucosa.

Clinical Discussion

Warren and Gates [7] described a set of diagnostic criteria for “Multiple Primary Carcinomas(MPCs)” as follows: (a) the two neoplasms must be malignant, (b) the two neoplasms must be anatomically separated and not connected by epithelial or submucosal neoplastic changes, and (c) the possibility of metastasis from the primary tumor must be eliminated. All these criteria were found in the present case. The increasing incidence of Oral Squamous Cell Carcinoma in young adults is of grave concern. This is leading to loss of valuable work force for the country. It has been observed that chewing tobacco is being used along with Pan Masala which is advertised by the biggest film stars and other famous personalities. People with low education and lower socioeconomic status are very vulnerable

[8]. It has been found in many studies that we require preventive strategies in the formative years of life and young age. The big tobacco and Pan masala companies follow the motto of “catch them young” to maximize sale and profits. It has been observed that awareness of ill effects of tobacco was lowest among the poor people [9]. There is a need to include strategies for deeper penetration of health promotion activities and bringing desired behavioural changes in the young individuals [10]. Public health awareness, raising a mass movement against tobacco, sensitizing health care professionals and expansion of tobacco control centers can have a huge impact on preventing young individuals from falling into this trap of tobacco addiction [11].

In the present case, 2 successive synchronous lesions have been developed within a span of just 3 months [12], which is not common. As SCC is not very painful to start with, patient delayed any definitive treatment within months of each other. Long term habit can lead to Field Cancerization [13] and subsequent lesions may occur in different sites of oral cavity within months. Therefore, whole mucosa becomes prone to malignancy. This can affect on the prognosis and treatment plan of the patient. This Delayed Diagnosis **increase the morbidity and mortality of oral cancer patients.**

Oral Field changes and their relationship with risk factors: -

1. Aneuploidy & chromosomal Aberrations.
2. Alterations in cytokeratin expressions.
3. Changes in Blood group Antigens of ABH systems
4. Foci of cyclin D1 expression
5. Increased expression of the epidermal growth factor receptor.
6. Elevated TGF-alpha mRNA.
7. Increased proliferation
8. p53 overexpression
9. Lack of bcl-2 expression
10. Increased glutathione-S-transferase
11. Expression of the proto-oncogene product
12. Protein ‘Tyrosine Kinase’ & Protein ‘Tyrosine Phosphatase’ activity.

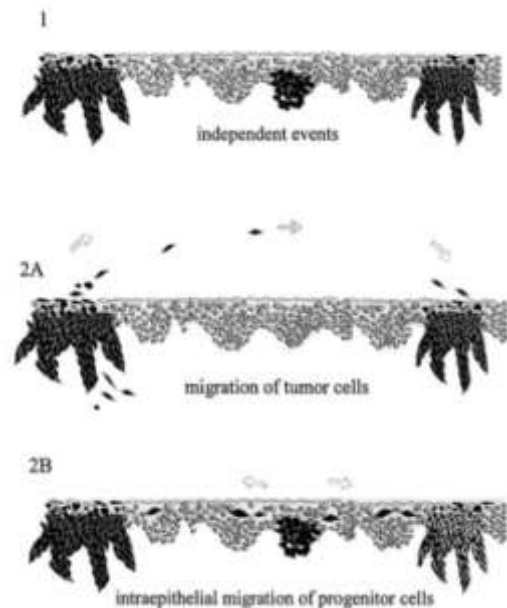


Fig. 1. Different field cancerization theories. HNSCC patients frequently develop more than one tumor and often have widespread premalignant lesions. The different theories for the occurrence of these multiple lesions are depicted.

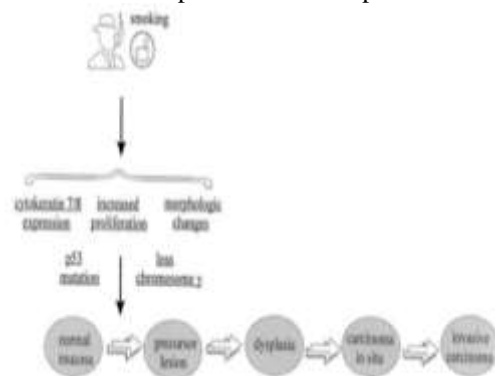


Fig. 2. Smoking-induced field changes. The abuse of tobacco is related to field changes in TAM from HNSCC patients (p53 mutations, chromosome Y loss, increased proliferation, cytokeratin 7 and 8 expression, and morphological changes). These smoking-induced field changes might be the beginnings of new, independently developing lesions.

III. CONCLUSION

Oral Squamous cell carcinoma which is the most common malignancy of the oral cavity was traditionally a disease of middle and old aged male individuals. Though Bilateral Oral SCC is not very common, due to rapid rise in sale of processed areca nut products along with tobacco use which starts very early in life, mostly in teenagers, this deadly disease is now found in young patients.



Advertisements of these products by the biggest media stars as well as sports persons are having a harmful impact on the young minds. Even big sporting events are being targeted by these companies. There is serious lack of awareness and knowledge among the targeted groups about the ill effects of these chewing products. The whole health and education system including central and state governments, schools, hospitals, health professionals, social media etc. should be geared to protect our young population from this disease and prevent loss of lives. The present article emphasizes that we need to be careful and watchful about oral lesions particularly malignancy by the way of early diagnosis, proper follow up and counselling.

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