

# Gingival Squamous Cell Carcinoma – A Diagnostic Enigma: A Case Report

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## Abstract

Oral squamous cell carcinoma (OSCC) is the most common epithelial malignant neoplasm that affects the oral cavity; It is often misdiagnosed because of its variable and innocuous clinical appearance. Carcinomas of the gingiva are a unique subset of OSCC, accounting for approximately 10% of OSCCs. This lesion can mimic a multitude of oral lesions especially those of inflammatory origin with benign features and can lead to delay in the diagnosis and hence delayed treatment. This is a case report with follow up of a 65-year old female patient who came to the department with chief complaint of pain and mobility in the left upper back region of the jaw since one week. On intraoral examination, a single proliferative growth present with respect to buccal, marginal and attached gingiva of 28. On palpation the growth is non-tender, firm in consistency and margins are irregular and fixed to the underlying tissue. Diagnosis was confirmed histopathologically.

## KEYWORDS

Early detection, Squamous Cell Carcinoma, Oral Cancer

## 1 | KEY MESSAGES

This case report emphasizes the importance of early diagnosis and illustrates the contribution that oral assessment can provide.

## 2 | INTRODUCTION

Oral Squamous Cell Carcinoma (OSCC) accounts for more than 90% of all oral cancers and is one of the most aggressive malignancies in the world.<sup>1</sup> Carcinomas of gingiva are a unique subset of OSCC, accounting for approximately 10% of OSCCs and can mimic a multitude of oral lesions of inflammatory origin with benign features, often leads to delay in the diagnosis and delayed treatment. The most common sites of involvement of OSCC are the lateral and ventral surface of the tongue, the buccal mucosa and floor of the mouth. The gingival lesions are least affected, which comprises about 10% of all OSCCs and about 91% of patients with gingival carcinoma are aged above 66 years.<sup>3,4</sup> The 5-year

survival rate of gingival Squamous Cell Carcinoma (SCC) is considerably less as compared to SCC developing at other sites, suggesting a poor prognosis.<sup>5</sup> It is essential that the lesion should be diagnosed early to begin treatment and to prevent micro metastasis. This case of gingival carcinoma in an elderly woman would have been easily missed if there was no careful clinical examination done

## 3 | CASE HISTORY

A female patient of 65 years old presented with a chief complaint of pain in the left upper back region of the jaw for one week. The pain was spontaneous in onset, continuous, moderate in intensity, and pricking in nature. There was also a history of mobility associated with the left posterior maxillary tooth for one week.

No history of any other associated symptoms. Her medical and family history were non-contributory. The patient reported a habit of tobacco chewing for 15 years, 4 times daily and used to keep it in her left buccal mucosa. A single left submandibular lymph node was palpable, measuring approximately around 1 cm in diameter, mobile and non-tender on



**FIGURE 1** Facial profile

palpation and firm in consistency. On intraoral examination, a single proliferative growth was observed on the buccal, marginal, and attached gingiva of tooth 28. It measured approximately 1 cm in diameter, extending anteriorly from the mesial aspect of 27 to the distal aspect of 28, posteriorly to the tuberosity, and vertically from the attached gingiva to the depth of the vestibule.



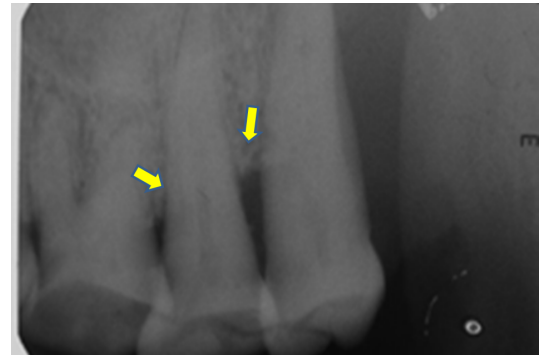
**FIGURE 2** Intraoral view showing growth

The surrounding mucosa appears normal. The colour over the growth is reddish. On palpation all the inspeactory findings were confirmed. The growth was non-tender, firm in consistency and margins were irregular and fixed to the underlying tissue. Bleeding on probing was noted. 28- Grade II mobility present and non-tender on vertical percussion. Palatally, a solitary swelling is present, measuring around 5x5 mm, extending 2 cm away from the attached gingiva of 26.

On palpation, it is non-tender and firm. Based on history and clinical evaluation, provisional diagnosis of Malignancy involving attached gingiva with respect to 28 [T1N0M0]. In the view of the clinical aspects of the lesion, the differential diagnosis of gingival carcinoma, pyogenic granuloma, peripheral giant cell granuloma were given. Baseline investigations such as hemogram were non-contributory. Intra oral periapical radiography revealed severe periodontitis.



**FIGURE 3** Palatal view showing swelling



**FIGURE 4** Intra oral periapical radiography revealed severe periodontitis.

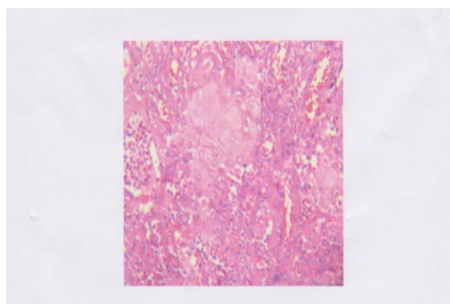
PNS and Maxillary Cross Sectional Occlusal Radiography did not reveal any appreciable changes. Panoramic Radiography revealed, severe bone loss with respect to 28, Loss of Lamina Dura and supporting bone with respect to 28 and almost giving appearance of "tooth floating in space". Histopathology showed moderately differentiated squamous cell carcinoma. Patient underwent partial hemimaxillectomy in 26, 27, 28 region and it showed infiltration of malignant epithelial cells to posterior margin, superior margin and maxillary sinus lining [T4aN0M0]. The patient was under follow up for about 6 months post radiation and did not show any signs of recurrence.

## 4 | DISCUSSION

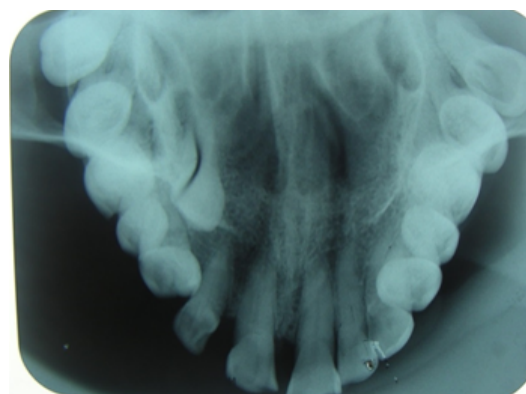
SCC of gingiva is more commonly seen in older female over 50 years and more frequently involve mandible than maxilla. Gingival OSCC is more aggressive and in its early stage bears a resemblance to common mucosal infection and can lead to delayed diagnosis or misdiagnosis, leading to delay in treatment and making the prognosis grave.<sup>6</sup> Gingival SCC is known to cause metastasis. Being more aggressive and causing micrometastasis to underlying bone without the radiographic evidence of invasion it cautions the clinician for early diagnosis. Radiographic appearance of Gingival Squamous Cell Carcinoma are saucerization of the crestal portion of alveolar ridge below this area there can be a relative



**FIGURE 5** Panoramic Radiography revealed, severe bone loss wrt 28, Loss of Lamina Dura and supporting bone with respect to 28 and almost giving appearance of “tooth floating in space”



**FIGURE 6** Incisional biopsy of the growth showed moderately differentiated squamous cell carcinoma



**FIGURE 8** Maxillary Cross Sectional Occlusal Radiography



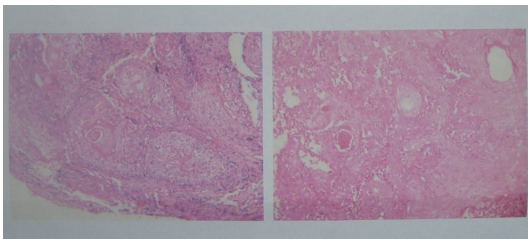
**FIGURE 7** PNS

malignancy.<sup>2</sup> Subtle differences between Gingival Squamous Cell Carcinoma and periodontitis, in GSCCs trabecular remnants will be present, ragged bone margin, wide zone of transition, no reactive bone and marginal sclerosis often absent.<sup>2</sup> This case of gingival SCC in an elderly woman could have been easily missed without a careful clinical examination. Even the radiograph as a standalone investigation suggested periodontitis with bone loss. However, cancerous lesions are likely to have grown and invaded the deeper structures extensively. Therefore, emphasis must be placed on the history and a thorough clinical examination, as these lesions can go unnoticed, especially if small or in a relatively inaccessible area.

lack of sclerosis at margin and wide transition zone, cortical margin loss and floating tooth appearance.. Extensive destruction with fingerlike expansion are the hallmark of GSCCs. Bone destruction and smaller areas of lysis within are described as bays in bays – a sign highly suggestive of



**FIGURE 9** Hemimaxillectomy in 26, 27, 28 region



**FIGURE 10** Infiltration of malignant epithelial cells to posterior margin, superior margin and maxillary sinus lining

## 5 | CONCLUSION

Most of the cases of GSCC are asymptomatic. We oral physicians have to look for the subtle changes and do not overlook the obvious ones. GSCCs can mimic periodontal disease. We Oral Physicians have to strive to reduce the oral cancer burden by half in the coming years and it is in our hands. This case report emphasizes early diagnosis and illustrates the contribution that oral assessment can provide

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**FIGURE 11** Follow up photographs



**FIGURE 12** Follow up photographs

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