



## CASE STUDY

### ORAL MALIGNANCY MASQUERADE AS AN INNOCUOUS LESION-A CASE REPORT

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#### ABSTRACT

Oral cancer is serious and growing problem in many parts of the globe. Squamous cell carcinoma comprises more than 90% of all oral cancers. The etiology is multifactorial. The current case highlights the importance of assessing tooth mobility or other signs of periodontal diseases in an otherwise healthy mouth should be regarded as suspicious and further correlating such cases with thorough habit history, clinical and radiographic examination. This would avoid the chance of misdiagnosis and help in early treatment of the lesion.

##### **Key words:**

Oral Cancer,  
Oral Squamous Cell Carcinoma,  
Misdiagnosis, Masquerading.

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## INTRODUCTION

Oral cancer (OC) is the most common malignant disorder of the oral cavity. Squamous cell carcinomas comprises more than 90% of all oral cancers. It represents the eight most common cancer worldwide. The most common risk factors for OC are tobacco and heavy alcohol consumption, in some Asian countries betel-quid and areca-nut chewing is found (Giacomo, 2016). Majority of the cases of oral squamous cell carcinoma (OSCC) are diagnosed at late stages, which makes the survival rates low and fatal for more than half the cases (Syed, 2015). OSCC is usually asymptomatic, and the initial symptoms are usually an intraoral mass or swelling, ulceration, pain, ill-fitting dentures, mobility of teeth, or an unhealed extraction wound. (Koduganti et al., 2012). The development of carcinomas in close proximity of teeth leads to gingival swelling which is associated with pain and loosening of involved teeth. The teeth may be extracted due to misdiagnosed as periodontitis. It has been found that surgical intervention in carcinomas may lead to

rapid growth and metastases to regional lymph nodes and distant organs (Ohtake et al., 1990). One of the most important factor to affect the prognosis of the patient is metastasis, therefore extraction in such cases should be avoided.(Shingaki et al., 1996)

## Case Report

A 60 year old male patient reported to School of Dental Sciences, Krishna Institute of Medical Sciences Deemed University, Karad, Maharashtra with the complain of pain in lower front teeth region and difficulty in speech and mastication for past 3 months after tooth extraction. The associated pain was continuous in nature, dull- aching type, non-radiating, aggravated on mastication and relieved on medication. Past dental history revealed that the patient had visited a general dental practitioner three months ago with the chief complaint of tooth mobility in lower front teeth region and got the lower front teeth extracted. His medical history revealed that he had no systemic disorder and was not on any ongoing medication. Patient had tobacco chewing habit 7-8 times a day since past 30 years, he kept the tobacco quid in

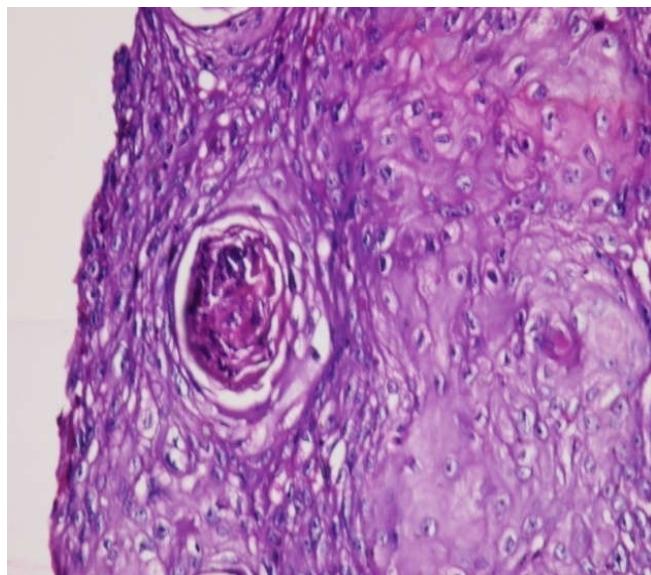
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lower labial vestibular region and spat it after 20 minutes. He did not have habits such as smoking or alcohol intake. General physical examination revealed patient was conscious, cooperative and well oriented to time, place & person. Vital signs were within normal limits. There was no gross facial asymmetry seen. Lymph node status revealed solitary, submandibular lymph nodes was palpable bilaterally. Lymph nodes were tender, fixed to underlying structures. Intra-oral examination revealed an ulceroproliferative growth measuring about 5cm X 3cm in size, extending from 33 to 43 region and reddish in colour. All inspectory findings were confirmed on palpation regarding site, size, shape and extent of the lesion. On palpation the lesion was scrapable, tender with no drainage noted. (Figure 1) Based on the clinical presentation, differential diagnosis included malignancy, osteomyelitis, peripheral giant cell granuloma, chronic fungal infection. The hematological parameters, blood sugar level were estimated and were found to be within normal limits. Panoramic radiograph revealed ill-defined radiolucency, diffuse bone loss, irregular borders and ragged edges at the lower anterior teeth region. Incisional biopsy of the lesional area was performed, tissue specimen was fixed in 10% formalin and sent for histopathological examination. Histologically, the sections revealed neoplastic cells in the underlying connective tissue in form of islands.



**Figure 1.** Lesion developed 3 months post-extraction



**Figure 2.** Photomicrograph of the histopathological examination showing keratin pearl formation and cellular and nuclear pleomorphism

The neoplastic cells included features like cellular and nuclear pleomorphism, increased nuclear cytoplasmic ratio, individual cell keratinisation and keratin pearl formation. Surrounding stroma comprised of inflammatory cell infiltrate and blood vessels. (Figure 2) The diagnosis rendered after histological examination of the biopsy specimen was moderately differentiated squamous cell carcinoma. The patient was referred to the Department of Oncology for further treatment. An adjuvant radiotherapy was given after surgical resection.

## DISCUSSION

Oral squamous cell carcinoma presents with a varied range of clinical signs and symptoms. These also occur in common non-neoplastic conditions of the oral cavity such as periodontal disease and dental abscesses (Singh and Schenber, 2013). The importance of good history taking is emphasized in the present case. Correlating the presence of tobacco related habit with neoplastic lesion is important in elderly patients. In the above discussed case, tobacco history raises suspicion which might have activated as a causative factor of OSCC. The mutagenic effects of risk factors like tobacco, alcohol, betel quid or areca-nut are dependent upon dose, upon frequency and upon duration of use, and are accelerated and exaggerated by the concurrent use of two or more of these agents (Petti, 2009). The presence of an OSCC involving the dentition, particularly in its initial stages, may consequently be overlooked by a clinician as a possible diagnosis (Singh and Schenber, 2013). If the symptoms for which dental extraction is performed do not rapidly resolve, or if the socket does not heal, it is most likely that there is further pathology in the alveolus or gingiva (Saxby and Soutar, 1989). Obuekwe et al., found OSCC to be the most common malignant neoplasm detected after extraction of teeth.(Obuekwe et al., 2005) Suzuki et al., found that the incidence of lymph node metastases in patients with SCC of the gingiva who had undergone an extraction preoperatively was significantly greater than in those who had not got teeth extracted. (Suzuki et al., 1998) Preoperative dental operations such as tooth extractions, incision, or curettage possibly lead to regional and distant metastases and therefore a poor prognosis in the patients with SCC of the gingival (Takahashi et al., 2013). Surgical interventions in oral cancer, including biopsy, causes the dissemination of cancer cells into the circulation, increasing the risk of metastasis (Kusukawa et al., 2000) Hence it is important to minimize these procedures to the minimal and perform only the most required. On the other hand, the association between survival and a history of dental extraction remains controversial. A few other researchers have stated that dental extraction has no influence on local control, lymph node metastasis, distant metastasis, or disease-specific survival before definitive treatment (Shingaki et al., 2002) Furthermore, Lubek et al. reported that history of previous dental extraction which could potentially seed the open socket with cancer cells and allow deep bony involvement was not found to be a significant variable (Lubek et al., 2011). T Singh and M Schenber enlisted a range of factors which should increase a clinician's suspicion that a neoplastic process may be masquerading as a common non-neoplastic condition of the oral cavity.

### These include

- The patient over 60 years of age, as they have an increased incidence of OSCC compared with younger patients.

- Localised gingival and mucosal lesions, mobility or other signs of periodontitis in an otherwise healthy mouth should be regarded as suspicious.
- A response to therapy that does not follow the normal pathway should be investigated further, especially in those patients with a history of known risk factors, in particular tobacco smoking and alcohol consumption.
- The mandible (in particular, the posterior mandible) to be a potential high-risk area for the development of OSCC in the setting of non-specific signs and symptoms such as pain and mobile teeth. (Singh, 2013)

To these we would like to add the importance of imaging before performing any procedure which would reduce the chance of misdiagnosis with a biopsy for confirmation. The purpose of this case report is to increase awareness among the general dental practitioners and also highlight the importance of recording the proper habit history, thorough clinical radiographical evaluation and histological evaluation before commencing any dental procedure in suspicious cases.

### Conclusion

In the present case too, tooth mobility was not correlated with OSCC by the general dental practitioner which led to misdiagnosis of extraction that could have easily avoided with adequate care. Metastasis is one of the most important factor to affect the prognosis of the patient, therefore extraction in such cases should be avoided. There is a need among dental health professionals for early and accurate diagnosis of oral cancer and potentially malignant disorders which would help reduce the incidence, morbidity and mortality of oral cancer.

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