



ORAL SQUAMOUS CELL CARCINOMA AS A SWELLING IN SUBMANDIBULAR REGION, AN UNUSUAL CASE AND AS AN ULCER IN BUCCAL MUCOSA - TWO CASE REPORTS

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ABSTRACT

Oral squamous cell carcinoma (OSCC) is the most common malignancy of the oral cavity. It arises from dysplastic oral squamous epithelium. It can occur in the mandible or maxilla without a preexisting oral mucosal lesion. However, OSCC may also mimic another oral pathological condition and therefore it can be a diagnostic challenge even for the most experienced clinicians. Here we presenting a two cases of oral squamous cell carcinoma, one as a swelling in submandibular region without any preexisting oral mucosal lesion, which is an unusual case and another one in buccal mucosa presenting as an ulcer

Key words: - Dental Adhesives, bond strength.

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INTRODUCTION

Oral cancer is the sixth most common cancer worldwide and squamous cell carcinoma (SCC) accounts for 90% of these cases. The highest incidence and prevalence of oral SCC (OSCC) is found in the Indian subcontinent where the risk of developing OSCC is increased due to deleterious habits of chewing tobacco, betel quid and areca-nut [1, 2, 3]. More than 90% of the oral cancers occur in patients over the age of 45, with a male predilection. The incidence increases steadily with age until 65, when the rates level off [4]. Occurrence of OSCC includes a gradual evolution from normal epithelium through transitional precursor states to a full-blown metastasis [5].

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CASE REPORT:

CASE 1:

The female patient of age 50 years, came to the outpatient department, with a chief complaint of pain and swelling in lower left back tooth region for the past 1 month. History revealed that 3 months back, particular tooth was slightly mobile, which had gradually increased and it was associated with pain from past 1 month. Since then, patient was not using that side for chewing. Followed by the pain, a swelling started increasing gradually to its present size at left lower region of the mandible. Initially the swelling was soft in consistency and with time it had become hard. Patient had experienced pain on digital pressure in relation to the swelling and had no other symptoms while having food. Patient had the habit of chewing betel quid for past 20 years, 10 times daily and used to keep the quid in right buccal vestibule. General physical examination revealed

that the patient was moderately built and nourished and all the vital signs were within normal limits and has no

history of any other systemic disease.



Figure 1: Patient profile



Figure 2: Side profile



Figure 3: Intra oral picture – left buccal mucosa



Figure 4: Intra oral pic – right buccal mucosa

On extra oral examination, a single well defined ovoid swelling seen in the left sub mandibular region of the mandible measuring approximately about 5cms x 4cms in diameter. The skin over the swelling was normal and pinchable with no pulsations and it was mobile in all planes. No local rise in temperature was present. On intra oral examination, mild stains were seen in both right and left buccal mucosa, with pouch keratosis measuring approximately about 2.5cm x 2cm in right side. In left side, 36 was tender and slightly mobile with edentulous 37 and 38 region. Mucosa in this region was smooth and intact with no other changes. No signs of paresthesia was elicited in that side.

IOPA and OPG revealed localized periodontitis in 36 and partially edentulous 37 and 38 region. USG of left submandibular salivary gland showed mixed echogenic well circumscribed soft tissue mass lesion with multiple specks of calcifications, one area of calcareous

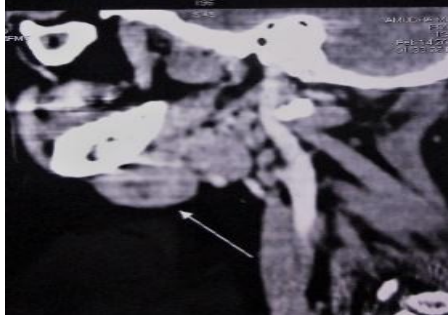
degeneration and dilated intra glandular ducts. Colour Doppler studies showed reduced vascularity. No calculus in Wharton's duct. CT scan revealed a well circumscribed oval shaped enlarged lymph node in left sub-mandibular region with central necrosis which is 3.8 x 2 cm in cross section. Submandibular gland is displaced. Patient Underwent surgery and excised the swelling. On microscopic examination, H&E-stained soft tissue section showed malignant epithelial cells exhibiting dysplastic features like cellular and nuclear pleomorphism with numerous keratin pearl formation. The connective tissue showed numerous chronic inflammatory cell infiltrate predominantly of lymphocytes. Vascularity was moderate suggestive of well differentiated squamous cell carcinoma in relation to left submandibular region. Patient refused for further investigations.



Figure 5: IOPA



Figure 6: OPG



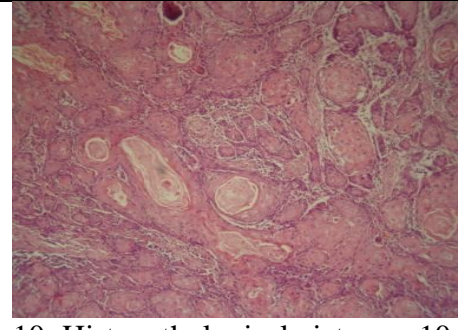
7: CT SCAN size - 38.3*23.6mm



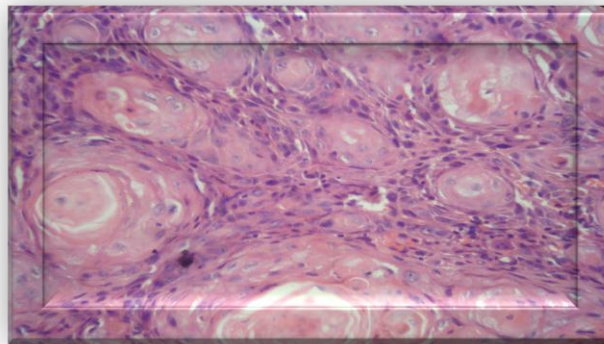
8: Ultrasonography



9: Specimen picture



10: Histopathological picture – 10x



11: Histopathological picture – 40x

CASE 2:

A male patient of age 35 years came to our department with the chief complaint of pain and swelling in the right lower 3rd of the face for the past one week. His history revealed that patient had noticed the swelling in the right side of the lower jaw before 10 days which was gradually increased in size followed by, he experienced pain in that region. He consulted the general

physician for the same complaint and had some medications, followed by subsiding of pain and swelling occurs to some extent. He had difficulty in chewing on that side and also experienced burning sensation on spicy food. Patient had the habit of chewing mawa for the past 17 years, more than 5 packets a day. He used to keep the quid in right buccal vestibule.



12: Patient profile



13: Intra oral picture



14: Intra oral picture

On extra oral examination, a mild facial asymmetry was noted in right lower 3rd of the face. No other secondary changes were seen over the swelling. On palpation, the swelling was tender and firm in consistency. On lymphnode examination, in the right side, nodes were palpable and soft in consistency, no palpable lymphnodes were present on left side.

On intraoral examination, a single well defined ulcerative growth seen in the right buccal vestibule which furrows into buccal mucosa measuring approximately about 5cm x 1cm in dimension extending from mesial surface of 43 to retromolar area. The same ulcer which furrows into buccal mucosa measuring approximately about 2cm in diameter extends from mesial aspect of 43 to distal aspect of 45. Bleeding areas were evident on the

ulcer. On palpation the ulcer was tender with rolled out margins and base were fixed to the underlying structure with the discharge of pus. Mobility and tender on percussion was present from 44 to 47. Based on the above findings we came to the provisional diagnosis of chronic non healing ulcer in right buccal vestibule involving the buccal mucosa. OPG revealed a horizontal bone loss is seen in the interdental region of 44, 45 and 46 till the apices with generalized crestal bone loss. CT scan showed 5X3.5X2.5cm size irregular shaped well enhancing soft tissue density mass lesion noted involving right buccal region causing erosion of the buccal cortex of right mandible and infiltrating into the right mandibular alveolar processes. The fat plane between the lesion and the anterior border of right masseter muscle is not clearly maintained, suggestive of growth in right

buccal region causing erosion of buccal cortex of right mandible infiltrating the right mandibular alveolar process with infiltration into anterior border of the right masseter muscle. Above features were suggestive of neoplastic etiology and patient was advised incisional biopsy. On microscopic examination, H&E-stained sections showed malignant epithelial cells infiltrating into the connective tissue in form of sheets and islands. Epithelium showed dysplastic features like altered

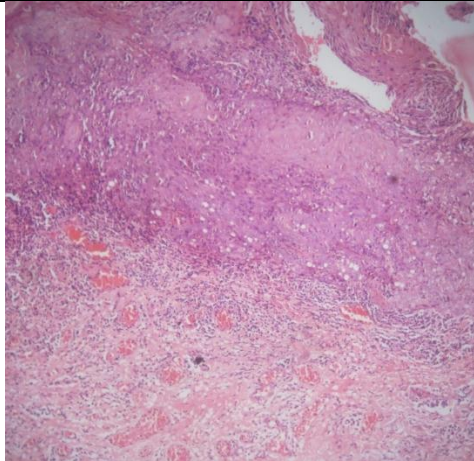
nuclear cytoplasmic ratio, cellular and nuclear pleomorphism, nuclear hyper chromatism, individual cell keratinization and mitotic figures were evident. Connective tissue showed chronic inflammatory cell infiltrate predominantly of lymphocytes and plasma cells and hence diagnosed as well differentiated squamous cell carcinoma of left alveolar ridge involving buccal mucosa. Then the patient was referred to an oncology Center for further treatment.



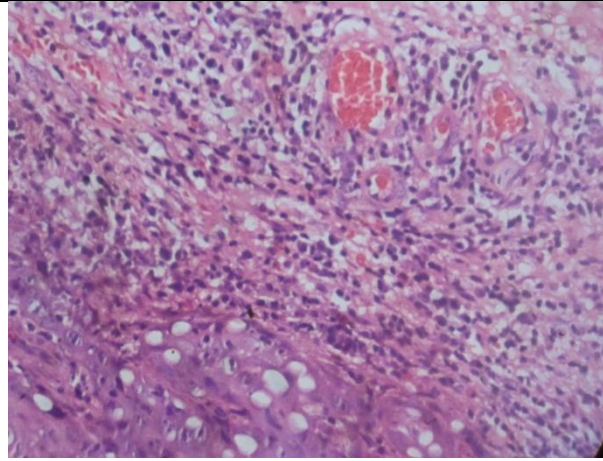
15: OPG



16: CT Image – Coronal view



17: Histopathological picture – 10 x



18: Histopathological picture – 40x

DISCUSSION:

Neoplasm is defined as an abnormal mass of tissue the growth of which exceeds and is uncoordinated with that of the normal tissue and persists in the same excessive manner even after the cessation of the stimulus which evoked the change [6].

The difference in the clinical presentation of oral cancers are due to differences in the location of the cancer, the function of affected structure, the clinical biology of the cancer and the health status of the host[7]. Squamous cell carcinoma of the buccal mucosa accounts for approximately 41% of all cancers in India [8, 9]. Risk factors such as tobacco and heavy alcohol use predispose

patients to the development of the cancer of the buccal mucosa. In addition, ill-fitting dentures, lichen planus, the use smokeless tobacco [8, 10, 11] and betel nut chewing are associated with cancer of the buccal mucosa⁸. Cancers of the buccal mucosa arises more commonly from preexisting leukoplakia than do other oral cancers¹². These cancers may commonly appear as an exophytic or verrucous mass or they may simply present as a nonhealing ulcer, leukoplakia, trismus, pain or facial paralysis. The buccal region allows the cancer easy access laterally into the buccal fat and the underlying musculature, and enables spread to maxilla or mandible. Signs such as facial paralysis, induration or

frank infiltration of the skin and trismus indicate advanced cases. Nearly half of the patients with buccal cancer present with stage III or IV disease [13]. Currently, the predominant treatment for carcinoma of the buccal mucosa is surgical excision with or without post-operative radiation [14]. Improved outcomes for patients with buccal carcinoma have been reported with the change in primary treatment from radiation to surgical therapy [9, 15]. Surgical therapy has been reported as equal to or better than radiation therapy for early stage of tumors [16] but superior to radiation for higher stage disease [12]. Local recurrence is a major problem in the treatment of cancer of buccal mucosa. Reported local recurrence rates ranges from 37% to 45% depending on the stage of disease [17].

Oral squamous cell carcinoma of the alveolar ridge accounts for approximately 10% of all malignancies occurring in the oral cavity. These cancers usually arise in the inferior alveolar ridge and in the region of posterior dental arch. Cancer of alveolar ridge occur mostly in the edentulous areas and at the free margins of the gingiva. This cancer usually occurs in men, a 4:1 ratio over women, and predominates in the

sixth and seventh decades of life [18]. Approximately 35% to 50% of patients have mandibular invasion demonstrated radiographically and histologically [19]. Clinical evidence of metastasis is present or becomes apparent over the course of disease in 30% of cases [19]. Metastasis is usually to the deep jugular nodes. Patients usually complain of loosening of the teeth or ill-fitting dentures associated with a nonhealing lesion. Numbness to the lower teeth suggests mandibular invasion [8]. Early stage of cancers of the alveolar ridge may be managed effectively with the surgery alone. In addition, the efficacy of radiation in eradicating tumor that has invaded cortical bone is limited; this is best treated with surgery followed by radiation [8, 20]. Careful assessment of the mandible and of the presence of perineural invasion is needed before treatment [8, 20]. Overall, 5-year survival rates for patients with carcinoma of the alveolar ridge range from 50% to 65% [21]. The presence of cervical metastases, however, definitely decrease the survival in these patients. Distant metastases is rare in tumors of the alveolar ridge and is reported at a rate of approximately 3% to 4% [19, 22].

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