

CASE REPORT

MALIGNANT Vs. TRAUMATIC TONGUE ULCER: A CLINICAL APPROACH

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ABSTRACT: The incidence of oral cancer is rising in India. Mortality from the disease remains high and survival has not improved significantly. Both prevention and early detection within the general dental practice setting have a potential impact on overall incidence, morbidity and mortality from oral cancers. The primary dental health team has an integral role in the early detection of oral malignancy and potentially malignant lesions. However, the clinical features may sometimes be ambiguous. The aim is to present two cases of tongue ulcers with ambiguous clinical presentation. One was innocuous tongue ulceration, not responding to conservative treatment modality and found to be squamous cell carcinoma on biopsy, treated successfully at referral center; while the other was mimicking a malignancy at initial presentation, but turned out to be innocent one. Thus, emphasizing the need of thorough routine clinical examinations as an essential mean so as to improve the survival of patient.

KEYWORDS: Early detection, Tongue ulcer, Innocuous tongue lesion, Squamous cell carcinoma, Traumatic ulcer, Oral cancer.

INTRODUCTION: Tongue ulcerations are common lesions encountered in daily practice. The most common cause of a chronic solitary ulcer of tongue is chronic trauma such as resulting from sharp edges of a broken tooth or ill-fitting dentures. Other less common causes include proliferative reactive process (Traumatic ulcerative granuloma with stromal eosinophilia, atypical histiocytic granuloma or proliferative myositis); infections like tuberculosis, late stage of syphilis or fungal infections like histoplasmosis.¹ In some cases it may be of malignant etiology-carcinoma.²

Lingual carcinoma undergoes metastasis early & a 5-year survival rate is very poor if it is diagnosed at advanced stage. It is therefore of extreme importance that the dental practitioner diagnose lingual cancer in its very early stage.² Hence, management of a chronic ulcer on the tongue requires a thorough history & clinical examination. Any suspicious ulcer, not healing within two weeks after conservative treatment needs to be biopsied to rule out the malignancy.³

This article reports two cases of tongue ulcer a malignant & a traumatic, emphasizing the diagnostic features. First case was a seemingly innocuous mucosal alteration of tongue, which was found to be squamous cell carcinoma on incisional biopsy & was treated successfully in initial stage (T1M0N0) at referral center. Other case was of an ulcer mimicking malignancy but which healed completely following extraction of the offending tooth.

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Case I: A 39-year-old male reported with complaint of pain and burning sensation in the left lateral side of tongue for 4 months. Patient had received symptomatic treatment from a general practitioner, but was not relieved. On intraoral examination small, ill-defined, erythematous (erosive) innocuous appearing lesion of size 1.5x1.0cm was present on posterior left lateral aspect of tongue, near 35, 36

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& 37 (figure no.1). The lesion was ill defined with reddish erosive surface. Left submandibular lymph nodes were enlarged, palpable and tender. Patient gave a history of tobacco chewing 3-4 times/day since last 4 years. Hematological investigations were within normal limits. Because of painful nature of the lesion, the traumatic etiology was given a consideration.

Suspicious sharp edges of teeth cusps were smoothed & patient was kept under observation with symptomatic treatment for two weeks. The lesion was persistent & had become increasingly painful (figure no.2). A provisional diagnosis of suspicious non-healing ulcer was made considering the history of tissue abuse habit & clinical picture. Incisional biopsy was done subsequently, which led to the diagnosis of a well differentiated squamous cell carcinoma (figure no.3& 4).

Case II: The second case was a 56-year-old female patient who reported with pain & burning sensation associated with ulcer on right lateral surface of tongue since one month. Patient had taken medication from a local medical practitioner for the same, but the lesion did not heal. Right submandibular lymph nodes were palpable. She gave history of betelnut chewing for 2-3years which she had stopped four years ago. On intraoral examination a reddish white ulcerative lesion of approx. 1.5x1cm in size was seen on right lateral surface of tongue.

The ulcer had indurated borders and firm base (figure no.5). Lesion was minimally tender on palpation. The clinical presentation raised suspicion of a malignant ulcer and was scheduled for biopsy. At the same time badly carious 47 with ragged margins, seeming associated with the lesion was extracted. Patient was followed up after one week, subsequent to the extraction. On examination there was an uneventful healing of the ulcer indicating a traumatic etiology (figure no.6).

DISCUSSION: In day to day clinical experience, dentists & medical practitioners often encounter a wide spectrum of oral mucosal lesions. They range from innocuous mucosal alteration needing simple therapeutic remedies & patient counseling to lesions of life threatening nature such as carcinomas.

Squamous cell carcinoma being the most frequent oral cancer is on the rise & worldwide estimated to be the 6th most common cancer. In 90-95% of cases, oral squamous cell carcinomas present as a non-healing ulcer. It is more prevalent in males and usually associated with tobacco use in all forms and alcohol intake.⁴ SCC of the tongue is associated with a poor survival compared to other oral sites, and higher metastatic rates have been reported for base of tongue tumours in comparison to the anterior tongue. This can be ascribed to the lymphatic network that is denser toward the base of tongue compared to the tip of the tongue.⁵

The first case reported here was a tongue lesion that appeared as a reddish erosive lesion, with shallow ulceration and was associated with pain. However, the suspicious traumatic cause was excluded by grinding the sharp edges of adjacent teeth. Nutritional deficiency & infectious causes were excluded by giving conservative treatment with multivitamins, analgesics & topical antifungals for 2 weeks. As the lesion did not show any regression in two weeks, considering the site (lateral border of tongue), habit of tobacco chewing and non-healing nature of the lesion, incisional biopsy was planned & the lesion was diagnosed as squamous cell carcinoma.

In the current case, the location of lesion on lateral aspect of tongue was probably due to the adjacent pooling of carcinogen as the patient had habit of tobacco chewing. Though malignant ulcers

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are not so painful, here this nature of the lesion may be due to exposure of area of high nerve density or secondary infection of the lesion.

A number of different mechanisms considered to be involved in the onset of head and neck cancer pain have been reported, including: stimulation of the nerve endings in the oral mucosa; compression and invasion of sensory nerves; tissue ulceration and its subsequent infection, leading to inflammation and pain.⁶ Due to early diagnosis and treatment, the lesion was excised without evidence of regional metastases. This significantly improved the prognosis of the disease. Early detection of oral cancer makes them amenable to treatment. Delay in diagnosis or referral has a significant effect on the associated morbidity and mortality.⁷

At the same time a non-healing traumatic ulcer must also be considered in differential diagnosis. Traumatic causes of oral ulceration may be physical or chemical one. Physical damage to oral mucosa may be caused by sharp surfaces within the mouth such as sharp cusps, ragged edges of carious teeth, faulty dentures & restorations. Physical injury is likely to cause a localized deep ulcer & often the clinical picture may be misleading.⁸

These are soft on palpation & may have rolled margins with whitish surrounding mucosa.⁹ In the second case the lesion was firm & showed indurated margins, which might be due to the continuous trauma or chronicity.¹⁰ The presence of risk factor as betel nut chewing and age were also in favor of a malignant possibility. But, the dramatic response to extraction ruled out any malignant cause.

Early detection and treatment of the oral cancer is mandatory for a high cure rate. Unfortunately valuable time is lost in accomplishing both the targets. The magnitude of problem is highlighted by available statistics. The average time delay between patient's first symptoms and a professional examination is 4 to 9 months. The average time delay between detection and initiation of the treatment is 5 to 6 months. Another study indicated that the physician is better than dentist at diagnosis and referral. So, the ability to assign a high index of suspicion is a prerequisite for early diagnosis and referral.¹⁰ (Clinical feature to assign a high index of suspicion are listed in Table no. 1).

The delay in diagnosis and treatment of oral cancer can be attributed to three things. First public awareness of oral cancer is low compared with the other forms of the cancer. Therefore the patients generally ignore the signs and symptoms. Second health professionals like dentists and specialists who routinely diagnose more common complaints in oral cavity may overlook the risk of possible malignancy. On the other hand, health professionals not familiar with diagnoses and treatment of oral complaints realize the need for referral sooner. Third, oral squamous cell carcinoma presents in a variety of ways and most early lesions are asymptomatic.⁴

Thus, given to the morbidity associated with the carcinomas, and as we know that even the innocuous looking lesions can turn out to be malignant, every such lesion must be looked upon cautiously. The ultimate decision for further management lies in a well taken history and a thorough clinical examination, as it has a major impact on patient's wellbeing.

CONCLUSION: In conclusion improving prognosis of patient with tongue carcinoma can only be achieved by careful examination of a seemingly innocuous lesion to achieve early detection of malignant or premalignant lesions, prompt performance of biopsy and referral for treatment earlier. Though at times the presentation of a lesion may be misleading, but the further line of management should be weighed upon the judicious knowledge of one's through clinical diagnosis.

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FEATURES THAT SHOULD RAISE SUSPICION

- Non-healing painless ulcer present for >3 weeks.
- Shallow ulcer with a velvety red base & a firm raised border.
- Induration and lack of inflammation surrounding ulcer.
- Ulcer with rolled thickened edge.
- Tobacco chewing, smoking and/or alcohol use.
- Males >40 years.
- Previously diagnosed premalignant lesion in the area.
- Location in high risk areas of oral cavity(lower lip, ventral & lateral surface of the tongue, floor of the mouth, retro molar region & soft palate).
- No local & systemic factors that could potentially cause ulceration.

Table 1: Clinical feature to assign a high index of suspicion of malignant oral ulcer

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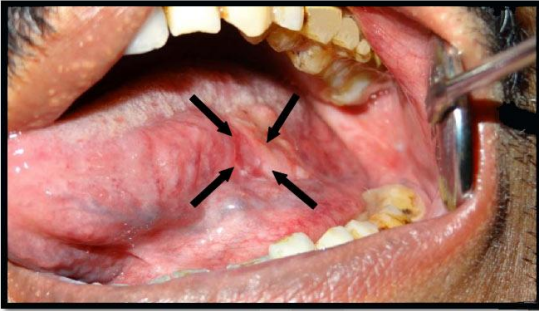


Fig. 1: Initial lesion with innocuous clinical presentation

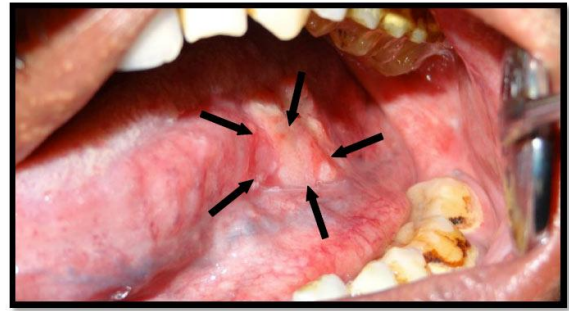


Fig. 2: Lesion 2 weeks after conservative treatment

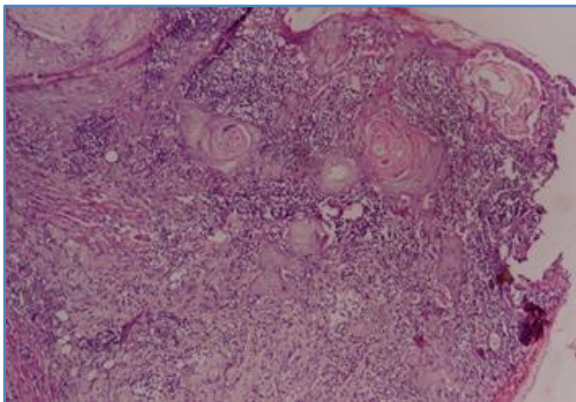


Fig. 3: Photomicrograph showing islands of dysplastic epithelium and keratin pearl formation (H & E stain, 10X)

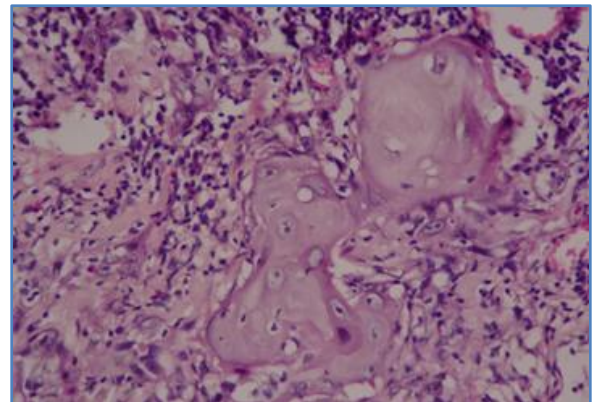


Fig. 4: Photomicrograph showing islands of dysplastic epithelium and keratin pearl formation. (H & E stain, 40X)

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Fig. 5: Ulcer present on right lateral surface of tongue



Fig. 6: Uneventful healing of the ulcer

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