

## **Traumatic Ulcer –Mimicking Squamous Cell Carcinoma**

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### **I. Introduction**

Oral ulcerations are the one among common complaints for which patients attend out-patient clinics and the commonest cause is traumatic injuries. Injuries can result from accidentally biting oneself while talking, sleeping and secondary to mastication. Other forms of mechanical trauma, as well as chemical, electrical, or thermal insults, may also be involved. In addition, fractured, carious, malposed, or malformed teeth, as well as the premature eruption of teeth, can contribute to the formation of surface ulcerations. Poorly maintained and ill-fitting dental prosthetic appliances may also cause trauma. Sites can be anywhere in the oral cavity according to the etiology. Usually it presents as typical ulcerations with well-defined margin surrounded by erythematous halo and covered with yellowish or greyish white pseudomembranous slough<sup>1</sup>. Following is a case report with an unusual presentation of a traumatic ulcer which mimics a squamous cell carcinoma.

### **II. Case Report**

A 60 year old female patient reported to the department with chief complaint of pain in the right side of mouth since 3 weeks. Pain was mild, continuous and used to aggravate on taking hot and spicy foods. Following which noticed a small nodular swelling. The swelling was initially small in size gradually progressed to the present size. No progression or reduction in size noted since 6 months. Gradually patient noted mild surface ulceration. There was no associated bleeding and pus discharge. Patient has no motor or sensory disturbances associated with the same. Patient gives a history of angina attack 2 years back and is under medication. She is hypercholesteremic and hypertensive too. She had the habit of pan chewing since early childhood and continued the habit for about 6-7 years.

Patient was moderately built and nourished with no abnormalities of gait and posture. On extra oral examination pallor noted and submandibular lymph nodes were palpable which is tender, firm and mobile. No icterus, clubbing, cyanosis, pedal edema noted and vitals were well within the normal limits.

On intraoral examination right buccal mucosa shows a growth near right upper first and second molar teeth which is saucer shaped with indentation and keratotic areas in the middle of growth and size measuring about 2 x 1 cm with color similar to that of adjacent mucosa except hyperkeratotic area in the middle with yellowish pseudomembranous slough in the floor which was seen along the occlusal plane with no extension into upper and lower right vestibule, alveolar ridge or pterygomandibular raphe. [figure 1] Adjacent mucosal areas were normal. No bleeding and suppuration noted.

On palpation lesion all the inspector findings were confirmed. It was tender with non-indurated borders and base not fixed to the underlying structures. Floor was covered with pseudomembranous slough. The right submandibular lymph nodes were palpable, and it was tender and firm in consistency. Patient gave no history of fever, vesicle formation or any previous episode of similar ulceration. Since the upper right second molar is fractured and grossly decayed, and due to its constant contact with right buccal mucosa we came to a provisional diagnosis of traumatic ulcer right buccal mucosa (Fig. 1). But as it presents clinically as proliferative growth was suspected to be squamous cell carcinoma and planned incisional biopsy and specimen were sent for histopathological examination.

### III. Histopathology

On histopathological examination, the section showed an ulcerated stratified squamous surface epithelium in association with fibrovascular connective tissue. The epithelium exhibited proliferation into the underlying connective tissue in an arcading pattern. The underlying connective tissue exhibited dense, diffuse mixed inflammatory cell infiltrate. The epithelium also exhibited koilocytic changes suggestive of mucositis.(fig 2)

### IV. Discussion

Traumatic ulcerations are considered as the most common oral ulcerations.<sup>(2)</sup>Chronic ulcerations results from fractured,carious,malformed tooth, as well as ill-fitting dentures. In newborns and infants sublingual ulcerations occur as a result of chronic mucosal trauma due to natal teeth and is often associated with breast feeding. In children traumatic injuries occur due to electrical or thermal burns as they tend to insert items into mouth.<sup>(3 4 5)</sup>

In adults traumatic ulcers results from fractured, carious, malformed teeth and ill-fitting dentures.Surface ulcerations usually heal within 10-14 days but it can persist for a longer time due to systemic disorders.Sites of traumatic ulcerations can vary according to etiology. Usually presentation is well defined erythematous area with raised margins surrounded by erythematous halo and floor covered with yellowish or greyish pseudomembranous slough.Clinical presentation often suggestsetiology<sup>(6)</sup>.

Our case report makes a difference in the clinical presentation of a usual traumatic ulcer by mimicking the presentation features of squamous cell carcinoma. Oral squamous cell carcinoma appears as mixed white or reddish proliferative growth like lesion with raised margin and ulcerated surface with yellowish or greyish pseudomembranous slough.Usually ulcer will be tender, indurated and fixed to the underlying tissues with palpable and tender regional nodes. The presented case here is more like a proliferative growth with palpable regional lymphnode.Chronic traumatic ulcer usually single ulcer with a breach in the epithelial continuity with floor covered by yellowish white slough which can be either symptomatic or symptomatic with raised borders and firm on palpation.Ulcer resolves and heals on removal of causative factor with or without scar depends on extent of damage<sup>(7)</sup>

In cohort studies conducted worldwide prevalence of traumatic ulcer varies.In Thailand and Malaysia prevalence is 13.2% and 12.4%<sup>(8)</sup>Elderly Thai patients reported with 15.6% traumatic ulcer ,most of them due to poor denture and sharp edge of tooth<sup>(9)</sup> while lower prevalence reported from Spain<sup>(10)</sup>Denmark 4.4% and Chile 3.5%<sup>(11)</sup> In a large group of Saudi dental patients over the age of 15 years Al-Mobeeriek and Al Dosari (2009) found a prevalence of 1.9% accounting for the third most common oral mucosal disease in that cohort of patients.

Sometimes traumatic ulcer presents as deep lesions with involvement of underlying muscle and thereby healing process may be delayed and eosinophilic infiltrates can be seen histologically.Healing period can vary up to 8 weeks with lymph nodeinvolvement. As treatment removal of predisposing factors should consider first such as restoration of sharp teeth, replacement of broken filling,use of mouth guard to avoid self-bite to the mucosa. Use of corticosteroid an prevent recurrences<sup>(13)</sup> and conservative surgical excision with clean margins provide better results<sup>(13, 14,15)</sup>. Prognosis of traumatic ulcer is good if diagnose and treated early. Clinical presentations can be deceiving some times. Proper historytaking and thorough clinical examinations and appropriate investigations and its interpretations are needed to arrive at a confirmed diagnosis of the case.

### V. Conclusion:

Traumatic ulcer is one among the commonest solitary ulcer presenting in the oral cavity and heals after the predisposing factor is removed and it usually present with no significant symptoms. But non healing large traumatic ulcer with symptoms like lymphadenopathy as reported in our case can mimic squamous cell carcinoma.Thorough history taking and clinical examination is inevitable and proper biopsy and histopathological examination is mandatory to confirm the diagnosis and only after that patient should be continued with treatment so that it will provide a better prognosis for the condition.

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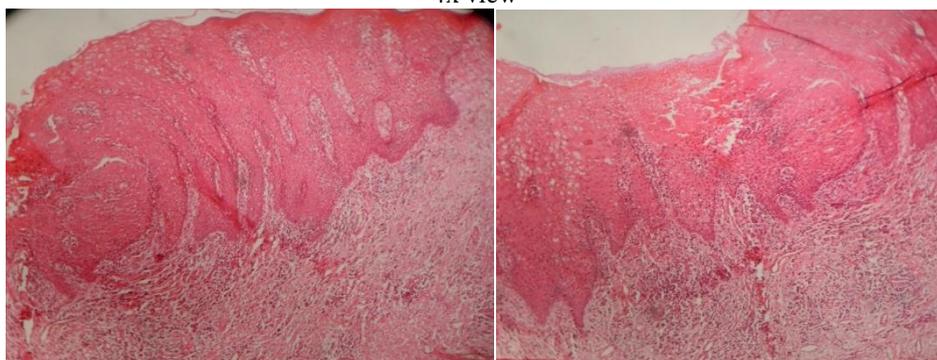
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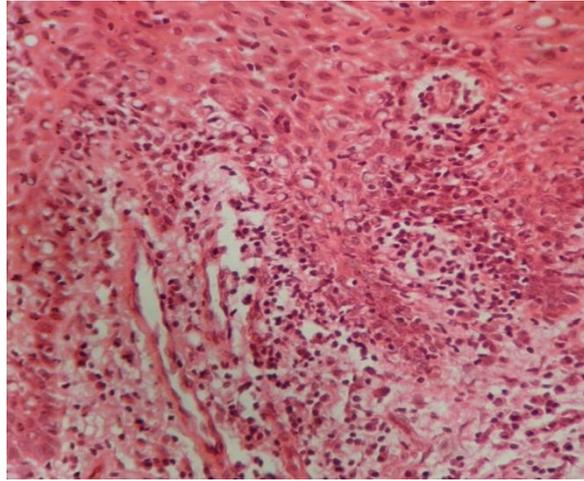
Figure 1:ULCER on the right buccal mucosa



4x view



10x view



40x view