

**Case Report**

## Foreign Body in the Lower Lip: An Incidental Finding

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**Abstract:** Orofacial trauma most commonly in the anterior tooth region are common in teenagers and adolescents. Incisors are frequently involved, and uncomplicated or complicated crown fractures usually are due to traffic accidents and sports injuries. Prevalence of the incisor's traumas among childhood and adolescence ranges from 7 to 33%, according to gender and age of individuals. Dental trauma requires a special consideration when dental fractures accompany soft tissue lacerations. Many a times foreign particles or fractured tooth portion gets embedded in the soft tissues mostly the lips, leading to inflammation. Trauma may involve labial tissues directly or indirectly. Marginal edges are the main cause of this indirect trauma to the lower lip. About 50% of traumatic injuries to permanent incisors are associated to labial laceration and bleeding or soft tissue trauma. Clinical and radiographic examinations of the soft tissue have to be carried out to locate any object embedded in the involved site. This is one such case report which highlights the importance of careful examination, diagnosis and management of post traumatically embedded tooth in lower lip.

**Keywords:** Orofacial trauma; lower lip; Foreign Body.

### INTRODUCTION

Orofacial trauma most commonly in the anterior tooth region are common in teenagers and adolescents. Incisors are frequently involved, and uncomplicated or complicated crown fractures usually are due to traffic accidents and sports injuries. Prevalence of the incisor's traumas among childhood and adolescence ranges from 7 to 33%, according to gender and age of individuals. Dental trauma requires a special consideration when dental fractures accompany soft tissue lacerations.

### CASE REPORT

A 23 year old female patient came to the department of oral medicine and radiology at Bapuji dental college and hospital Davangere with the complaint of pain in upper front tooth region since 3 days. She gave a history of continuous pain of moderate intensity which is localized to the tooth without any aggravating or relieving factors. She gave a history of fall in bathroom 3 days back, there was history of bleeding from lower lip. She also had sensitivity to cold food items since 3 days. Her medical and drug history are not significant. Her past dental history revealed that

she had visited govt. hospital in Jagalur and was given injection Diclofenac, tab. Diclofenac and tab. Ranitidine after trauma.

On extra oral examination, bilateral submandibular lymph nodes were palpable, solitary, roughly oval, soft, mobile and tender. A diffuse solitary swelling was evident on the lower lip, roughly oval, 2×3cm in size, the surface of swelling was stretched, shiny with brownish pigmentation and a healing crust. (fig 1) On palpation, the swelling had raised temperature, tender and firm in consistency. On intraoral examination, laceration was evident in lower labial mucosa, the mucosa appeared whitish in colour about 1 cm in size with surrounding erythematous area. On palpation the area was tender and firm in consistency. On hard tissue examination, complete compliment of teeth were present except for 18 and 28. Ellis class III fracture was evident w.r.t 21 and 31,32,41,42 were tender on vertical percussion.

Based on clinical findings a provisional diagnosis of traumatic swelling of lower lip and Ellis class III fracture w.r.t 21 was given.



**Fig-1: swelling of lower lip**

### Radiographic examination

Intra oral periapical radiograph was taken w.r.t 21(fig 2) and 31, 32, 41,42 region (fig 3).



**Fig-2: IOPA radiograph reveals Ellis class III fracture involving enamel, dentin and pulp with widening of PDL space in the periapical region**



**Fig-3: Radiopaque structure evident superior to incisal portion of 32**

To confirm presence of artifact or foreign body in the soft tissue an IOPA film was taken with respect to soft tissue of lower lip with reduced exposure time. The radiograph revealed a radiopaque structure with sharp triangular margins. The density of which was close to that of enamel of tooth (Fig 4).



**Fig-4: Radiopaque object evident in the lower labial mucosa**

Based on the radiographic findings a working differential diagnosis of fractured fragment of tooth, embedded foreign body (glass, plastic or acrylic) at the site of injury was given.

Incisors are frequently involved, and uncomplicated or complicated crown fractures usually are due to traffic accidents and sports injuries. Prevalence of the incisor's traumas among childhood and adolescence ranges from 7 to 33%, according to gender and age of individuals [1]. About 50% of traumatic injuries to permanent incisors are associated to labial laceration and bleeding or soft tissue trauma [2, 3].

Crown fractures account for the majority of dental trauma in permanent dentition and represent 26-76% of dental injuries. And these fractured portions can get displaced and embedded in the adjacent soft tissues. Literature evidences show that fractured tooth fragments can be commonly found embedded in the upper lip, lower lip, tongue or alveolar mucosa. Incidence is more common in the lower lip as opposed to other sites of the oral cavity [4, 5].

Other than tooth portion, foreign bodies like glass, plastics, stones or acrylic can get embedded in the soft tissues in road traffic accidents or injury from fall. Soft tissue lacerations following trauma leads to chance of entrapment of foreign substances in the wound which can get infected and cause swelling and pain.

The patient was advised to take anti-inflammatory and analgesics to reduce the swelling & pain. After this, patient was referred for surgical exploration of lesion and retrieval of the foreign body under local anesthesia, which later turned out to be a part of fractured incisal edge of 21 (Fig 5).



**Fig-5: Retrieved tooth portion from the lower lip**

## DISCUSSION

Trauma is described as an injury resulting from an external force. It is the leading health problem the children are facing today. It has no significant predictable pattern of intensity and may not only leave physical scars but also has a psychological impact on the victim [6].

The damage to the teeth and their supporting structures correspond to one of the most frequent traumas to the maxillofacial region [7]. The tooth most commonly affected by trauma is the maxillary central incisor, with an incidence of 70-80% of all traumatic injuries [8]. The crown fracture following the trauma can lead to entrapment of tooth portion in the soft tissues. Usually a fractured or missed incisor does not pose any problem in diagnosis. However, when there is also soft-tissue laceration, the possibility of tooth fragments should be investigated [9]. Occlusal, periapical, and lateral radiographs help in the detection of the tooth fragments in the oral regions, especially if the laceration and bleeding make the clinical examination difficult [10, 11].

In our case the presence of tooth portion in soft tissue was an accidental finding. We identified the tooth portion during routine radiographic examination. Therefore, recognition and identification of the tooth portion is important because the continuous movement of contraction of the *orbicularis oris* muscle may dislocate these “foreign bodies”. Moreover, the oral bacterial flora can infect the wound and the deep tissues. Failure to remove totally the portions of teeth embedded in the soft tissue may result in a breakdown of the suture line, persistent chronic infection, discharge and a disfiguring fibrosis [12]. The treatment of choice in such cases remains the surgical excision of the fragments. Depending upon their size and the time they have been embedded in the tissue, these fragments can be used to restore the remaining fractured tooth.

In our patient, complete removal of the tooth fragment was undertaken and antibiotic coverage was provided to prevent future complication of secondary infections. Portion of tooth retrieved was small so it was not reattached to the tooth instead the patient was advised to undergo root canal treatment with crown placement.

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