

# TEETH CROWN EMBEDDED IN LOWER LIP FOLLOWING DENTOALVEOLAR INJURY: A CASE REPORT

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## ABSTRACT:

A proper diagnosis and care of dental injuries is a considerable factor in the comprehensive practice of dentistry. The case which is reported here describes a case of trauma to the maxillary incisors in which both central incisor teeth fragments remained embedded in the interior of a lower lip wound whose preliminary examination and splinting was done by an underqualified dental professional. Teeth fragment were removed by incision and healing was achieved with no further complication. Thorough examination will prevent the patient from undergoing additional surgical procedures for the subsequent removal of remaining fragments. Simple precautions and qualified practitioner can prevent undesired complications.

**Key words:** Embedded Teeth, Dento alveolar injury.

## INTRODUCTION:

Damage to the teeth and supporting structures is one of the most common sequence of dentoalveolar trauma, result of a physical violence, work or sports related accidents, automobile accidents, and, most frequently, falls. Following a traumatic injury to the face, a thorough examination of the soft tissues should be systematically performed, including an evaluation of the hard tissues (teeth and bone). A proper diagnosis and care of dental injuries is a considerable factor in the comprehensive practice of dentistry.

The appropriate initial attendance of patients suffering dental trauma is an important component, mainly in children and adolescents, because of the physical and emotion involvement of both the patient and their family. Along with proper inspection both intra and extra-orally, bidigital palpation, proper radiograph should always be taken to determine the presence or absence of a foreign body.<sup>[1-4]</sup> OPG which is most commonly prescribed radiograph in India has few disadvantage when comes to differentiate structures of maxillary or

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mandibular anterior region and hence any embedded foreign object are most likely to be missed. Tooth fragments in the lower lip are subject to constant movement due to contractions of the orbicular musculature and can end up distant from the original site of perforation at the time of trauma<sup>7</sup>. Fractured incisors are often the cause of soft tissue lacerations at the time of trauma.<sup>[5]</sup> For this reason, special care must be taken in cases of lacerations occurring with fractured or missing teeth.<sup>[6]</sup> The case which is reported here describes a case of trauma to the maxillary incisors in which tooth fragments remained embedded in the interior of a lower lip wound whose preliminary examination and splinting was done by an underqualified dental professional.

#### **CASE DETAIL:**

A 17-year-old male came to the clinic at the Dept of Oral & Maxillofacial Surgery at Teerthanker Mahaveer Dental College complaining of a firm mass in the lower lip that was sensitive to the touch. The patient already had arch bar splinting in maxillary teeth, with Ellis Class III fracture maxillary centrals, but his chief complaint was swelling in lower lip (Fig 1). On history taking it was revealed that patient had a maxillofacial trauma when he fell down of the bicycle and got his primary care and treatment for mobility in teeth from local unqualified professional. OPG revealed some radio-opacity in symphysis region (Fig 2), by careful palpation a firm nodule, in lower lip was discovered and thus an

IOPA of lower lip was prescribed which showed two separate embedded teeth fragments in lower lip. The patient underwent surgical excision of the fragments under local anesthesia (lignocaine in a 2% solution with 1:100,000 epinephrine) was administered through infiltration. The lower lip was incised and the fragments were identified and carefully removed with toothed tissue holding forceps (Fig. 4). Suturing was done with 3-0 silk. Amoxicillin 500 mg TDS, and analgesic was prescribed after surgery, as there were no further compliance from the patient during 6 months of follow up. The lip exhibited satisfactory healing. Root canal treatment and capping was further performed for maxillary anterior teeth.

#### **DISCUSSION:**

The damage caused to teeth and supporting structures is one of the most frequent consequences of maxillofacial trauma. Such damage can occur either in isolation or in conjunction with other fractures and soft tissue lacerations. In emergency situations, the harm caused to teeth may go unnoticed during the clinical examination, depending on the nature and complexity of the trauma and awareness of primary care provider.<sup>[4-8]</sup> Fractured incisors often cause lacerations to the soft tissues at the time of trauma. A number of studies have reported a greater frequency of dental trauma to the incisors during childhood and adolescence, with the prevalence ranging from 10–20%, depending on gender and age. It is not difficult to diagnose tooth fracture, but particular care must be taken

when such a fracture is associated with a soft tissue injury, as tooth fragments embedded in soft tissue can be overlooked during a clinical examination.<sup>[6]</sup> Ten previous cases were described in literature prior to this case.<sup>[7]</sup> The incorporation of a foreign body into the wound healing process increases the risk of infection and triggers foreign-body reactions and fibrous scar tissue. When this reaction is chronic, it leads to fibrosis, which encapsulates the foreign body.<sup>[8]</sup> It should also be empathized that dental treatment should always be performed by qualified practitioner in the present case, negligence was so much that both the crown portion of teeth got embedded, and despite the absence of an active infectious process, fibrous scar tissue surrounding the fragments was observed during the removal of tooth structure. The differential diagnosis is of utmost importance, especially when patients are evaluated after the original injury has already healed. Radiographic findings of tooth fragments in the floor of the mouth could indicate sialolithiasis.<sup>[8]</sup> In some cases, an increase in lip volume could suggest the presence of a tumor during the initial evaluation, as originally hypothesized in the present case prior to referral to the dental clinic. Linet et al

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reported a case of a foreign body embedded in the tongue following trauma that was initially considered a tumor mass. That hypothesis was promptly discarded upon surgical excision.<sup>[9]</sup> Surgical excision is the treatment of choice for tooth fragments embedded in the lip<sup>10</sup>. Depending on the size of the fragments and the length of time they were embedded in the tissue, it might be possible to use the fragments to restore the remaining fractured teeth.<sup>[11]</sup>

#### CONCLUSION:

Knowledge of the patient's injury, a thorough clinical examination, and a radiographic examination are necessary whenever clinical signs of dental trauma are observed during primary care for trauma to the maxillofacial region. For such cases, an analysis of the intra- and extra-oral tissue is critical, especially when there is a laceration in which foreign bodies might be present. Thorough examination will prevent the patient from undergoing additional surgical procedures for the subsequent removal of remaining fragments. Simple precautions and qualified practitioner can prevent undesired complications.

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**FIGURES:**



Fig 1: Broken crown of both central incisor



Fig 2: OPG showing radioopacity in symphysis region



Fig 3: tooth crown being excised after incision with tooth tissue forceps



Fig 4: Excised teeth crown of 11 & 21