

## A Report on Traumatic Dental Injury

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### Abstract

Trauma to the oral soft tissues such as tongue, mucosa, lips occur coz of any injury to the dentition. Traumatic dental injuries (TDI) represent one of the most common oral health problems requiring emergency management. Clinicians and primary health centre workers should be aware of the chances of inclusion of a fractured tooth fragment in any soft tissue of the orofacial region and the management protocol for the same. This paper reports a case of TDI where the fractured tooth fragment caused trauma to the tongue.

**Keywords:** Traumatic; Dental; Injury

### Introduction

Traumatic dental injuries (TDIs) are becoming common in the entire world. A recent report shows that more than one billion people have experienced TDI in their real life [1]. Trauma to the oral soft tissues such as tongue, mucosa, lips occur coz of any injury to the dentition. Most of the people experiencing TDI don't know the consequences of having such injuries. This results in people presenting late for treatment needs. This leads to difficulty in managing the situation clinically. Hence, awareness among the public is much needed to avoid such situations [2]. This report presents a case where TDI happened in a young patient.

### Case History

A 24-year-old male patient reported with the chief complaint of pain on tongue since a day. On asking for history, patient reported that a sharp tooth was troubling him for few weeks and he left it

without checking. And the pain was sharp and started suddenly. Patient was unable to have any food due to the pain. He could see something projecting from the left side of the tongue which made him feel very much conscious. Patient was systemically healthy and had no abnormal habits. Patient had no known allergies.

On intra oral examination, patient had a good oral hygiene with minimal amount of deposits. Patient's lower left first premolar was grossly decayed with minimal amount of tooth structure left. The tooth had sharp edges and was badly decayed. There was no periodontal findings seen with respect to the same tooth and it was firm, not mobile. The clinical situation was explained to the patient. Patient was informed that the pain was due to the decayed tooth being broken and a part of it was stuck on the tongue. It was advised for extraction of the specified tooth followed by replacement of missing tooth. However, patient was not interested

in any treatment other than removing the part that was stuck on the tongue. Instructions were once again reinforced as the causative factor needs to be addressed. After detailed explanations, patient was willing to get the tooth extracted after a few days as he had some personal commitments.

The treatment procedure was explained well to the patient prior to the procedure and an informed consent was obtained. Local anesthesia spray was used prior to local anesthetic injection in the tongue around the injured site to reduce the pain induced by injecting. The detailed examination of the part of the fractured tooth in the tongue was done soon after the anesthesia started to work. It was a sharp, tiny piece of tooth was stuck in the tongue. Dental explorers were used to feel the depth of the fractured fragment. After this, the sharp fragment that's seen outside was held with an artery forceps and tongue was held in position with tweezers by the dental assistant. The artery forceps was used to luxate the fractured portion and it was extracted out of the tongue. It was measured to be around 3mm in size (Figure 1a-d). The bleeding was arrested in the surgical site with gauze under finger pressure. Antibiotics and analgesics were prescribed for 3 days. Patient was detailed with post-operative instructions following the procedure.

**Figure 1:** a: Decayed lower left second premolar, b: Tooth fragment in the tongue, c: Extracted tooth fragment, d: Post-extraction of tooth fragment.

## Discussion

Traumatic dental injuries most often occur in oral soft tissues. Most of these injuries occur in tongue, lip and buccal or labial mucosa. A recent report from emergency department of the hospital shows that 62.8% of all patients with TDI reported with laceration injury in lips and tongue [3]. In these clinical situations, thorough clinical examination is mandatory along with radiographic investigations of the soft tissue. Any tooth fragment injury in the soft tissue should be addressed as early as possible as otherwise it may act as a foreign body leading to persistent chronic infection, discharge, breakdown and disfiguring fibrosis [4]. Tooth fragment in the soft tissue is subjected to movements because of the contraction and relaxation of the surrounding muscle fibers. This might lead to the displacement of the fragment from its initial position into any inaccessible distant sight causing further difficulty in removing it [5]. The worse complication one can encounter with TDI is aspiration of these fragments into the respiratory pathway causing chronic airway infection, block leading to death.

A detailed case history, thorough clinical examination of soft tissues and hard tissues, radiographic assessment is mandatory in examining cases with TDI. Further radiographic examination should be advised when the regular radiographs or clinical examination is not felt sufficient [6]. However, in the case presented in this report, radiographic examination was needed as the clinical examination of the tooth fragment was sufficient and removed completely. Incomplete clinical history taking or examination might lead to difficult consequences. The trauma care team in the hospital or the practicing dentist in the clinic must be aware of the current treatment plans and must know to manage the situation in an emergency basis. Finally, patient must be educated about various TDIs and ways to prevent them. A systematic trauma care protocol should be followed to avoid any undesirable consequences.

## Conclusion

Any grossly decayed tooth should be removed or treated at the earliest. Sharp edges from grossly decayed tooth are known to cause injuries in the tongue, lips and oral mucosa. It might lead to carcinoma of the soft tissues in a long run. Hence, patient must be educated regarding the same by the dental professionals. 'Prevention is better than cure' must be kept in mind while practicing dentistry.

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