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Fractured incisor fragment in the tongue: a case report

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Abstract

A case is described in which a fragment of a fractured incisor was embedded in the tongue. The possible mechanism by which this unusual event occurred is discussed. The need to investigate all soft tissue lacerations occurring in the presence of coronal tooth fractures is emphasized.

Introduction

Soft tissue injuries often occur as one result of dentofacial trauma, the skin or mucosa sustaining damage either by direct contact with the responsible object or by being driven onto the teeth. The coexistence of avulsed teeth or coronal fractures should alert the clinician to their possible loss in deeply lacerated wounds.

Tooth fragments may be embedded in any soft tissue. The lips are most often involved and standard texts on dental injuries[1,2] quote the careful analysis of four such cases reported by Allen.[3] Losses in other unusual sites such as the knee[4] or the hand[5] have also been documented, but loss in the tongue seems to occur rarely. Jacowski and Colas reported a case in which an avulsed lower canine was embedded in the tongue in a road traffic accident,[6] but reports of the loss of tooth fragments in the tongue have not been found.

Case Report

The patient was a healthy nine-year-old male who presented 48 hours after sustaining an oral injury. His parents reported that in a bicycle fall he had fractured an upper central incisor and badly bitten his tongue. Emergency care had been given at the casualty department of a local hospital where the lacerated tongue had been sutured and the parents told to seek dental advice for the fractured incisor.

On examination he was found to be an alert, cooperative child. There were minor abrasions to the skin of his chin and nose, but no other extra-oral injuries were present. The tongue was swollen and painful with a deep transverse laceration of its dorsal surface measuring 1.5cm across, and situated 1.0cm from the tip. The wound did not quite extend through the tongue, but the ventral surface was contused below the dorsal laceration. The upper right central incisor showed a coronal fracture of the mesio-incisal angle extending just into dentine.

Since the parents could not account for the missing fragment, a lateral radiograph of the injured tongue was taken. This clearly revealed an opaque body corresponding in shape, size and density to the missing fragment (Figure 1). Manipulation of the tongue for radiography distressed the child, so that photographs were not taken at this emergency visit.

A stainless steel crown was placed to restore the fractured crown temporarily. Later in the day the foreign body was easily removed from the tongue under general anesthesia and identified as the missing tooth fragment. The wound was reclosed with a resorbable suture.

Recovery was uneventful and after six weeks the tongue had healed completely with no apparent scarring. At this time the stainless steel crown was removed and the fractured incisor was photographed (Figure 2) before placement of an acid-etch composite restoration. Further investigation was undertaken to

Figure 1. A lateral radiograph of the tongue protruded over the lower lip, showing the embedded fragment.

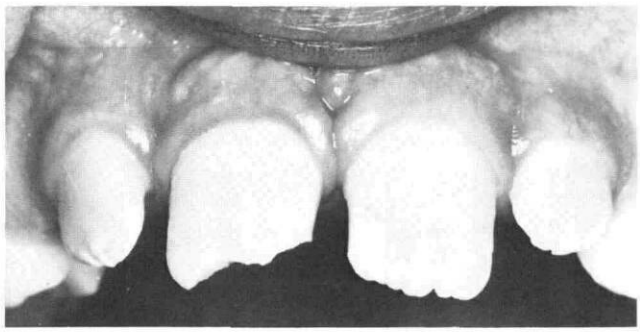

Figure 2. The traumatised incisor showing the missing mesio-incisal fragment.

try to explain the loss of the fragment in the tongue. The parents reported that they had previously noticed that the child's tongue was prominent. On examining his teeth in occlusion it was found that he had a small anterior open bite, with the tongue lying between his upper and lower incisors (Figure 3).

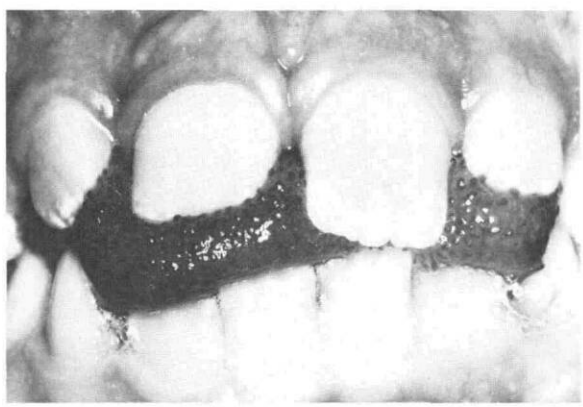

Figure 3. The teeth in occlusion showing the anterior open bite and the tongue position at rest.

Discussion

Allen speculated that tooth fragments become embedded in the lips in the following way: "A possible mechanism for these injuries is that the tooth, having penetrated the full thickness of the lip, is fractured as it emerges from the skin and strikes a hard object. The detached tooth fragment is retained in the soft tissue which envelops it at the moment of impact."[3] In the case reported here it seems likely that a similar mechanism was responsible. A blow to the chin forced the teeth into occlusion with the tongue trapped between the incisors. The upper incisors penetrated the tongue through almost its entire thickness and the right central incisor was fractured within soft tissue on near contact with a lower incisor.

Embedded teeth or fragments may cause infection[4,6] with the possibility of later scarring and medico-legal repercussions. For this reason it is important that all soft tissue wounds occurring in association with missing teeth or fragments are carefully investigated before closure, using radiographs if necessary.

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References

1. Andreasen, J. O. Traumatic injuries of the teeth: Copenhagen, Munksgaard, 1972, p 44.
2. Hargreaves, J. A. and Craig, J. W. The management of traumatised teeth in children: Edinburgh and London, Livingstone, 1970, p 12.
3. Allen F. J. Incisor fragments in the lips, Dent Practit Dent Rec, 11:390-391, 1960-61.
4. Snawder, K. D., Bastawi, A. E., and O'Toole, T. J. Tooth fragments lodged in unexpected areas, JAMA, 236:1378-1379, 1976.
5. Parkington, T. R. and Taylor, K. J. Unusual cause of gnawing pain in the hand, Brit Med J, 281:1683-1684, 1980.
6. Jacowski and Colas Incarceration dentaire d'origine traumatique dans la langue et sous la muqueuse vestibulaire, Rev Stomat (Paris), 53:909-912, 1952.