

CASE REPORT



Repositioning of intruded anterior tooth: Case report

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Abstract

Tooth intrusion occurs when a tooth is moved more axially. The periodontal gap between the tooth and the bone cannot be seen radiographically. It is seen as one of the most severe types of traumatic injury. Depending on the age, root, dentition type growth, the prognosis, and treatment for trauma severity varies. A 3–6 mm intrusion has a strong prognosis, whereas an intrusion over 6 mm has a rather poor prognosis. The present case study focuses on the surgical repositioning of the left maxillary central incisor that has been intruded due to falling.

Keywords: Forceps, splinting, surgical repositioning

Introduction

One of the most serious forms of dental traumatic injuries is intrusive luxation and is characterized as a displacement of the tooth in the axial direction to the socket.^[1,2] Comparison to other kinds of luxation wounds, intrusion seldom occurs in permanent dentition. This includes 0.5–1.9% of all permanent dentition traumatic injuries and 5–12% of dental luxations.^[3,4] Due to their high propensity for eruption and pulp/periodontal repair, waiting for spontaneous reeruption is recommended for immature permanent teeth. If the teeth is extensively intruded (>7 mm) and root formation is complete, surgically or orthodontically relocation is done along with splinting for 2–3 weeks is recommended. The present case study focuses on the surgical repositioning of the left maxillary central incisor that has been intruded due to falling.

Case Report

A 12-year-old male came to the dental clinic with the chief complaint of inwardly placed front tooth after falling down the stairs while playing. He presented the central incisor with a background of pain and sensitivity. The patient's extensive case history has been compiled. No relevant medical history was available. On extraoral inspection, there was no evidence of jaw fracture seen. On intraoral inspection, as shown in Figure 1, the left central incisor was intruded and gingival laceration was seen around the left permanent central

incisor and canine. It was determined that splinting and root canal therapy of the intruded left maxillary central incisor would be accompanied by immediate surgical repositioning.

After the administration of local anesthesia, the intruded tooth was gently luxated with the help of elevator and brought to its original position with the help of forceps [Figure 2] care must be taken not to damage the periodontal ligament of central incisor. Figure 3 shows 21 in occlusion. 0.5 mm stainless steel wire is used for splinting. Acid etchant is placed over the surface of the tooth (from the right lateral incisor to the left lateral incisor) dentin bonding agent is applied and cured. Composite is place over the etched tooth and the splint is placed and light cured. Patient was put on light diet.

After 4 weeks, patient was recalled and splint was removed. Root canal therapy was completed.

Clinical examination showed no periapical abnormalities at a 6 month recall assessment. On radiographic examination, recovery was visible with no evidence of root resorption or any other known post-treatment problem, and normal periodontal space surrounding the intruded tooth was maintained [Figure 4].

Discussion

Extreme injuries with a high risk of complex sequelae are invasive dislocations. This risk is enhanced when the teeth is entirely intruded into the alveolar socket and has an immature root apex.



Figure 1: Intraoral view showing intrusion of 21

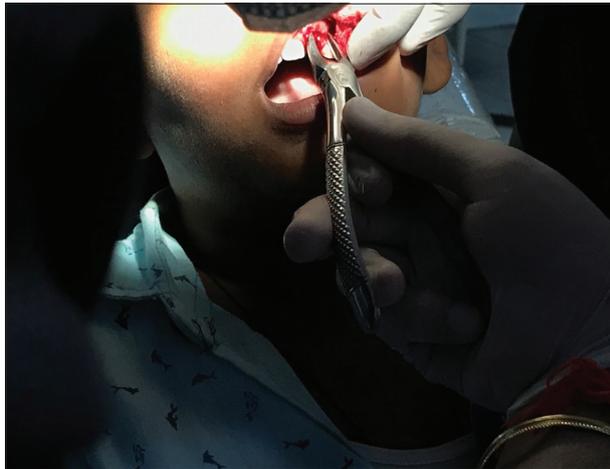


Figure 2: Intentional extrusion of intruded 21

A case involving the left permanent maxillary central incisor is described in this case study. Surgical repositioning and root canal therapy have proven to be useful in fixing the problems produced by the consequences of an intrusive injury while also efficiently avoiding the post-operative problems that are generally linked with such traumas.

Conclusion

The apical and periodontal healing in this case was acceptable, confirming the efficacy of surgical repositioning combined with



Figure 3: Splinting and placement of ss wire splint



Figure 4: 6 months recall assessment

adequate root canal therapy in the treatment of deeply intruded permanent teeth.

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