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CASE STUDY

MANAGEMENT OF LATERALLY LUXATED MAXILLARY CENTRAL INCISOR

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ABSTRACT

All physical activities have an associated risk of orofacial injuries due to falls, collisions, and contact with hard surfaces. Lateral luxation is the displacement of the tooth in a direction other than axial, which is accompanied by comminution or fracture of the alveolar socket. The aim of this report is to present a case of a 40 year old female patient that was referred to the department of Conservative dentistry & endodontics after sustaining a cow hit that led to lateral luxation of the maxillary left permanent central incisor. Repositioning of the luxated tooth into its original anatomic positionand splinting with ligature wire and composite resin was performed .Root canal treatment was initiated within a week after splinting using Calcium Hydroxide as intracanal medicament & final obturation was performed after 15 days. Patient was asymptomatic with the tooth showing no signs of resorption.

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INTRODUCTION

- All physical activities have an associated risk of orofacial injuries due to falls, collisions and contact with hard surfaces.
- Lateral luxation is one of the most prevalent dental injuries among the general population, resulting in up to 27% of all dental wounds.
- Lateral luxation is the displacement of the tooth in a direction other than axial, which is accompanied by comminution or fracture of the alveolar socket.

Case report

A 40-year-old female patient came to our Department with the complain of pain after sustaining a cow hit that led to lateral luxation of the maxillary left permanent central incisor. According to the patient's history the traumatic injury had occurred 1 day before.

- The upper left maxillary central incisor was displaced in the Palatal direction by the hit.
- The tooth could not be replaced by digital pressure. It was decided to perform repositioning by Extraction Forcep under local anesthesia.

The tooth was secured by fixation in its position for 4 weeks using ligature wirings extended from the upper left canine to the upper Right canine.

- Ellis Class II fracture occurred with the upper right maxillary central incisor which became Grade II mobile due to the traumatic injury.
- On clinical examination there were no other signs of injury intra-orally and extra-orally.
- Root canal treatment was done for for both left and right maxillary permanent central incisors.

DISCUSSION

Lateral luxation is characterized by the forceful displacement of the root tip through the facial alveolar wall, which complicates the repositioning procedure. First, the tooth should be dislodged to maneuver it apically into its correct position. It is usually found that if the treatment of a laterally luxated permanent tooth is delayed (i.e., more than 3–4 days), the tooth is difficult to reposition.

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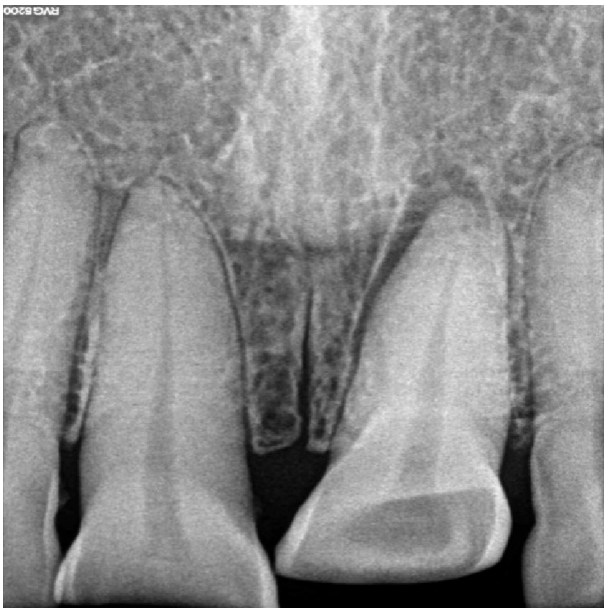
PRE - Operative photographs

Diagnostic radiograph



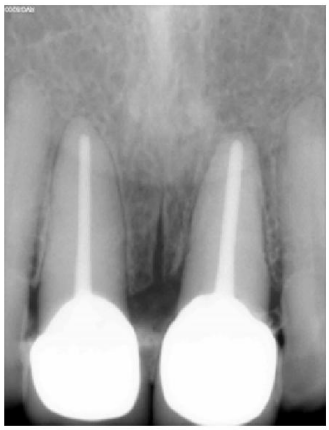
Treatement plan

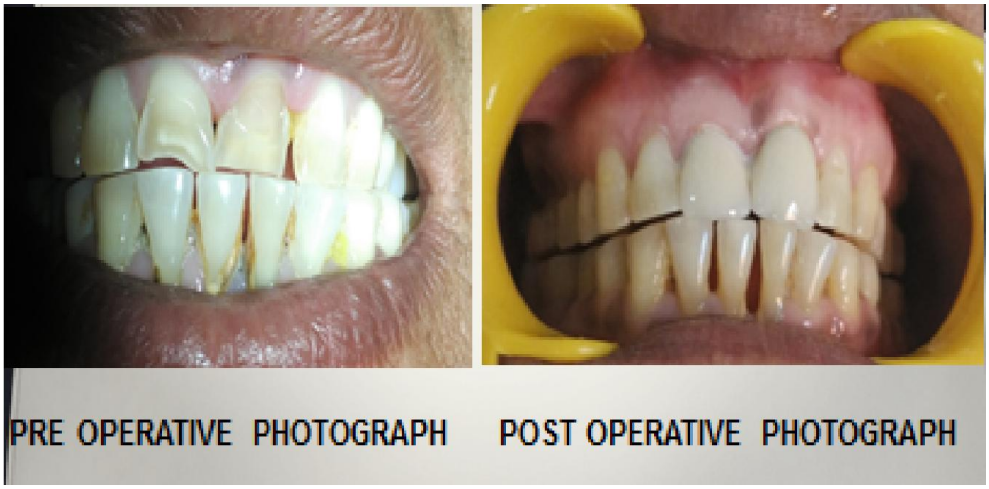
Composite splint fromcanine-to-canine

Radiograph post-splinting to verify position of repositioned tooth

- The tooth was placed in the socket under local anesthesia and splinting was done from canine to canine using composite and orthodontic ligature wire for 4 weeks.


OBTURATION


FOLLOW UP AFTER 3 MONTHS



According to the treatment guidelines for luxation injuries, the injured tooth should be repositioned into its normal position and stabilized with a splint. A splinting period of 3 weeks is recommended. If the root canal therapy is neglected, infection-related root resorption is a distinct and dangerous possibility. Lateral luxation injuries should be managed by a combination of clinical and radiographic observation, fracture reduction, splinting, and when required, endodontic treatment or extraction.

Conclusion

This procedure seems to have an advantage of maintaining the aesthetic appearance and occlusal function of the patient. No pathological alterations were observed over a follow-up period of 3 months after injury. Long term follow up with regular recall visits may confirm the success of the treatment.

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