Prince Sultan Medical
Military City, Riyadh,
Saudi Arabia

Management of Lateral Luxation of an Immature Permanent Incisor: A Case Report

Lamis Dagriri BDS, Safaa Maddah ABPD MPH FAAPD

Introduction

Dental trauma is the most common orofacial injury, affecting both permanent and deciduous teeth. Dental trauma is a worldwide concern that affects the quality of life by having functional, psychological, and social impacts. Central incisors make up 60% of the most affected teeth and it is a traumatizing experience for both the child and the parents, attributing that to their location, esthetic, emotional and psychological importance. Luxation injuries are the displacement of a tooth in any direction other than axial.

Case Presentation

A 7-year-old healthy boy presented with both parents to the emergency room at Prince Sultan Medical Military City (PSMMC) following orofacial trauma on April 2024 half an hour post trauma.
Extra-oral examination: the patient was sitting unsupported and showed no signs of facial injury.
Intra-oral examination: soft tissue laceration, avulsion of upper right primary lateral incisor, severe lateral luxation of the upper right permanent central incisor buccally, and grade III mobility of the upper left primary lateral incisor.

Managment

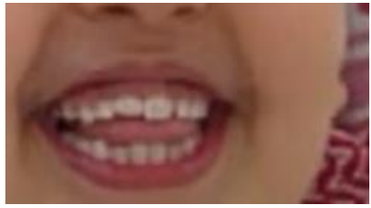
Following cleaning of the area and giving local anesthesia:
- Extraction of upper left primary lateral incisor due to its severe mobility
- Repositioning of the upper right permanent central incisor with digital pressure which wasn't fully erupted in previous photo
-Periapical radiograph taken showing immature root followed by splinting with orthodontic wire
- Paracetamol and Amoxicillin prescribed

Discussion and conclusion

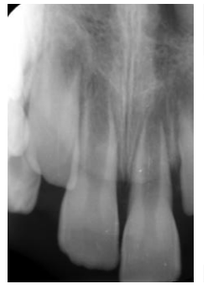
The emergency management of laterally luxated immature teeth is by repositioning the tooth digitally into its anatomical position, it should be done as soon as possible for better prognosis. Pulp canal obliteration is more prevalent in teeth with open apex while pulp necrosis is seen with closed apex. The most important factor in managing immature permanent teeth is maintaining regular follow up appointments. In order to allow continued root development and apex formation every effort should be made to preserve the pulp. And root canal treatment shouldn't be initiated based on a lack of response to pulp sensibility testing solely, but rather on confirmed evidence of pulp necrosis and infection in the root canal.

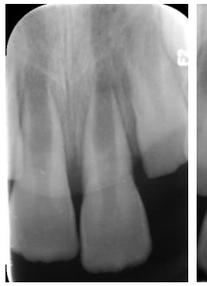

Intra-oral exam


Repositioning and splinting

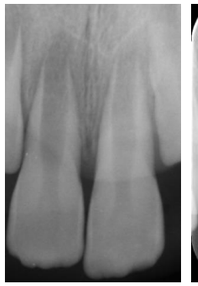

Previous photo (not fully erupted)


Day of trauma

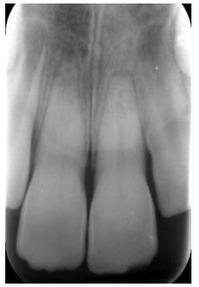

2w FU


4w FU


8w FU


12w FU


6m FU




1 Year FU


1 Year FU

References:
Saskianti, T, et al. (2022) 'Lateral Luxation Management in Young Permanent Teeth: An Effort to Prevent Pulp and Periodontal Pathologies ', International Journal of Scientific Advances, 3 (4), pp. 502-506. DOI: 10.51542/ijscia.v3i4.1.
Spinas, E, et al. (2024) 'Extrusive and lateral luxation injuries in permanent teeth: Literature Review and Treatment Complications Updated', European Journal of Paediatric Dentistry, 25(2), pp. 163-167. DOI: 10.23804/ejpd.2024.25.02.03.
Honório, H, et al. (2015) 'Posttraumatic Displacement Management: Lateral Luxation and Alveolar Bone Fracture in Young Permanent Teeth with 5 Years of Follow-Up', Case Reports in Dentistry, pp. 1-6. http://dx.doi.org/10.1155/2015/634237
Alencar, M, et al. (2019) 'Management of Dental Intrusion and Lateral Luxation: Case Report with 10 Years Follow-up', Iranian Endodontic Journal, 14(1), pp. 93-95. Doi: 10.22037/iej.v14i1.22623.
Khouloud, E, et al. (2021) 'Lateral Luxation of A Permanent Mature Incisor in A Thirteen-Year Old Male Patient: A Case Report', Ann Dent Oral Health, 4(1): 1037.
International Association of Dental Traumatology, 2020. *Guidelines for the management of traumatic dental injuries: 1. Fractures and luxations of permanent teeth.* Dental Traumatology, [online] 36(4), pp. 343-359.
Spinas, E., Pipi, L., & Dettori, C. (2020). Extrusive Luxation Injuries in Young Patients: A Retrospective Study with 5-Year Follow-Up. *Dentistry journal*, *8*(4), 136. https://doi.org/10.3390/dj8040136.