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Case Report

The curious case of the stuck Ring: An unusual clinical case of avulsion of the primary mandibular central incisor

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ABSTRACT

Background: Traumatic injuries are widespread in children in the younger age group. An avulsion is a type of dental trauma in which complete dislodgment of the teeth occurs from the respective socket. The primary maxillary central incisors are the most common teeth to be avulsed, followed by maxillary lateral incisors and the Primary mandibular central incisors.
Case Report: We present this case because of the unusual avulsion of a primary mandibular central incisor due to a freak accident by accidental engagement of father s ring in the child's tooth while playing with her. This should be addressed as emotional trauma related to the father and the child as Pediatric Dentist in this case.

1. Introduction

The literature revealed that about 13% of the Indian population has a prevalence of TDI, i.e., 13 cases in 100 individuals suffered from Dental trauma. Also, the age group below 6-years was found to be more prevalent than the age group above the age of 6-years.[1] Avulsion of a primary tooth is less commonly seen than permanent teeth routinely in clinical practice. The sequence of the prevalence of avulsion is seen to be more in primary maxillary central incisor followed by maxillary lateral incisor and mandibular central incisor.[2,3] This case is displaying an unfamiliar way of avulsion of a primary mandibular central incisor with hand jewellery while playing with her father.'

2. Case Presentation

A 4.5-year-old girl, accompanied by her father and grandfather, reported to a private clinic. They reported that the child lost a tooth in the lower jaw while playing with the father the previous night. They were spending time together by playful wrestling, and the child tried to engage her father's hand by biting on his ring. The primary mandibular lower incisor got entangled in the ring of the father's hand. (Figure 1) The father exerted pressure to disengage the same and led to the removal of the 71, which led to profuse bleeding. The parents and child were in shock. (Figures 2 and 3) The father controlled the bleeding by exerting pressure with cotton on the socket.

The medical and family history of the child was uneventful. The child had visited a local practitioner two years back in the dental history.

The primary mandibular central incisor was avulsed from its socket on intraoral examination. Indirect pulp capping was done with 75. There was a history of restoration with 85 got dislodged few months back, and the tooth was grossly carious with a pulp polyp. The 55 and 65 had occlusal pit caries. The 81 was grade 1 mobile.

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2.1. Investigations

RVG was taken with respect to 71 and 85 regions.

2.2. Treatment plan

The child was advised a soft diet followed by a painkiller (SOS) prescription. Restoration was done with 55 and 65. Extraction of 85 followed by distal shoe space maintainer. The father was advised to be on regular follow-up.

Fig. 1:

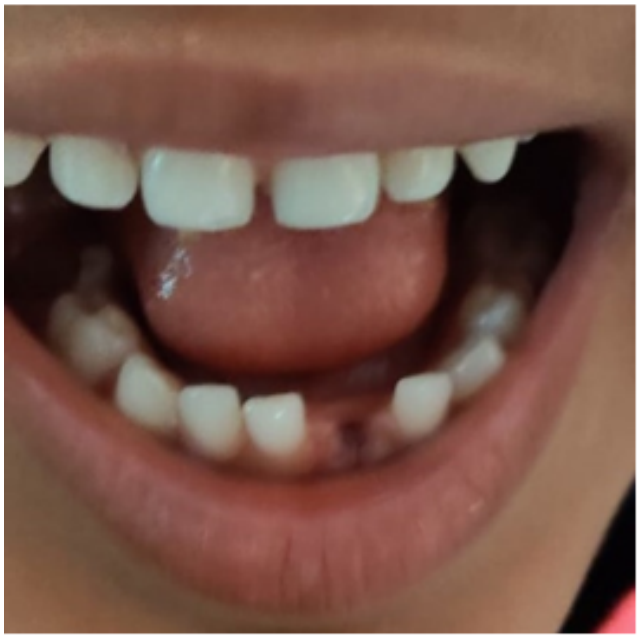

Fig. 2: Avulsion w.r.t 71

Fig. 3: Avulsed 71

3. Discussion

According to literature, the time period of 2-3 years in a child's life is critical for this type of dental injury to happen as their motor skills are still in a learning stage. The major concern with primary teeth avulsion is to preserve the underlying permanent tooth and calibrate the risk-benefit ratio behind it. Also, concerning the average developmental growth of the succedaneous tooth followed by regular eruptive movements, the avulsion of a primary tooth is less commonly seen than permanent teeth routinely in clinical practice.[4–6] Many authors have suggested that unlike the option of replantation of the permanent incisors, this treatment modality is not too successful in primary teeth. It may lead to the risk of damage to the succedaneous permanent tooth.[7] Several factors are involved in proper evaluation of the case, like the age of the child, involved teeth, damage of the alveolus or the surrounding structure, investigations involving radiographs or CBCT, splints, and adequate follow-ups. There is always a possibility of the primary tooth (replanted) becoming necrotic, painful and can lead to infection in the respective socket. However,

Acharya et al. have reported the replantation of a 62 followed by splinting within follow up duration till 12 months. The prognosis may be guarded.[8]

The replantation of tooth is concerned with the normal aesthetic of the child for building of self-esteem and feeling of comfort. However, the parents nowadays are equally concerned and feel guilty which makes the inclination to replant the tooth by pediatric dentist. Some authors have mentioned the consequences of failed transplant of incisors leading to the development of habit, problems in mastication and, some issues in speaking. If replantation of primary incisors performed under superlative circumstances, without any complications it could become possible and may lead to success.[9]

The thought process is different for the avulsed permanent teeth. The International Association of Dental Traumatology has issued the guidelines for both dentitions. The main factors which influence the prognosis of the avulsed Permanent teeth are the condition of the tooth, stage of apex development, patient s age, duration of the extra oral time of the tooth, transport medium, and many others.[10]

The avulsion of primary mandibular central incisors is uncommon. Further, Avulsion by engaging in a ring has not been reported in the literature. Many articles talk about the treatment aspect for such cases. As the pediatric dentist with the dental aspect our main concern was also the emotional aspect of the child and the father. He was feeling very guilty when he reported to the clinic. The child exhibited tense and fearful behavior (Frankel rating single negative). Both of them were counselled about the wellbeing of the child and hence were relieved and relaxed after the dental consultation. Remarkable improvement was seen in the child s behaviour (Frankel behavior rating; Definitive positive) in the consequent visits.

As a parent, we should be cautious when we engage in any contact activity with the children.[3–5] Bruises and lacerations from parent's rings are common, but this kind of injury has not been seen. Nevertheless, the parents should be counselled thoroughly.

4. Conclusion

The emotional trauma aspect related to the trauma victims should be addressed by us as Pediatric Dentists.

"**Prevention is always better than cure**."

5. Conflict of Interest

The authors declare that there is no conflict of interest.

6. Source of Funding

None.

References

1. Tewari N, Mathur VP, Siddiqui I, Morankar R, Verma AR, Pandey RM, et al. Prevalence of traumatic dental injuries in India: A systematic review and meta-analysis. *Indian J Dent Res*. 2020;31(4):601–14. doi:10.4103/ijdr.IJDR_953_19.
2. Kenwood M, Seow WK. Sequelae of trauma to the primary dentition. *J Pedod*. 1989;13(3):230–8.
3. Ravn JJ. Sequelae of acute mechanical traumata in the primary dentition. *ASDC J Dent Child*. 1968;35(4):281–9.
4. Mopagar VP, Phadnis MV, Joshi SR, Shetty V, Pendyala GS. Avulsion and Replantation in Primary Dentition–A Review. *J Evol Med Dent Sci*. 2021;10(9):619–23.
5. Kupietzky A. The treatment and long-term management of severe multiple avulsion of primary teeth in a 19-months-old child. *Pediatr Dent*. 2001;23(6):517–21.
6. Soporowski NJ, Allert EN, Needleman HL. Luxation injuries of primary anterior teeth - prognosis and related correlates. *Pediatr Dent*. 1994;16(2):96–101.
7. Andreasen JO, Ravn JJ. Epidemiology of traumatic dental injuries to primary and permanent teeth in a Danish population sample. *Int J Oral Surg*. 1972;1(5):235–9. doi:10.1016/s0300-9785(72)80042-5.
8. Acharya S, Mohanty S, Panigrahi A, Singh B, Khatri A. Avulsion and replantation of primary teeth-A feasible option. *Dentist Case Rep*. 2017;1(1):1–3.
9. Friedlander LT, Chandler NP, Drummond BK. Avulsion and replantation of a primary incisor tooth. *Dent Traumatol*. 2013;29(6):494–7. doi:10.1111/j.1600-9657.2012.01168.x.
10. Malmgren B, Andreasen JO, Flores MT. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 3. Injuries in the primary dentition. *Dental Traumatol*. 2012;28(3):174–82.

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