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Case Report

AN UNERUPTED DILACERATED PERMANENT MAXILLARY LEFT CENTRAL INCISOR: A CASE REPORT

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ABSTRACT

The impaction of the maxillary permanent central incisors is not frequently reported in dental practice, but when present, it can have a major impact on the dental and facial esthetics. It is regarded as unattractive and may affect the self esteem and general social interaction of the child. This article presents a case with an unerupted maxillary central incisor which was diagnosed radiographically with an impacted dilacerated maxillary central incisor. The dilacerated impacted maxillary central incisor poses a clinical dilemma, but can be successfully managed by surgical and orthodontic approach to get the best functional and esthetic results.

Keywords: Impacted, Unerupted, Dilacerated, Maxillary, Central Incisor

INTRODUCTION

Impaction is the total or partial lack of eruption of a tooth well after the normal age of eruption¹. Several factors have been suggested that impede tooth eruption. Most common factors associated with impacted teeth include supernumerary teeth in anterior maxillary region^{2,3}, odontogenic tumours such as odontomas, cysts^{4,6}, alteration in the path of eruption or formation of scar tissue due to trauma or premature loss of primary incisors⁷ and abnormal root angulation or dilacerations⁸. The frequency of maxillary central incisor impaction has been found in the range of 0.006 to 0.2%⁹.

The dilaceration is characterized by an angulation in the crown and root of the tooth. The term dilacerations was first used by Tomes. Dilaceration has been coded as ICD-9-CM 5204(a) based on the international classification of diseases-9th revision-clinical modification. This dilaceration is often related to the trauma from primary central incisors during early developmental stages of the permanent central incisors¹⁰. This article presents a case report of management of a dilacerated and impacted left maxillary central incisor in an eleven year old male patient.

CASE REPORT

A male patient aged eleven years reported to the Department of Pediatric & Preventive Dentistry, Rama Dental College, Hospital & Research centre, Kanpur (U.P.), [Figure 1] with a chief complaint of space in upper anterior region & pain in

anterior portion of floor of nose. The child was physically healthy and had no history of dental and medical trauma.

Intra oral examination revealed mixed dentition with Class I molar relationship.

There was a missing permanent maxillary left central incisor (21) [Figure 2].

A palpable bulge was observed in anterior part of hard palate which suggested that a missing tooth was impacted towards the palatal side [Figure 3].

An intraoral periapical radiograph was taken to ascertain the presence & position of missing permanent maxillary left central incisor. The IOPAR showed the ectopic position of unerupted 21 [Figure 4]. Occlusal radiograph of maxilla also revealed ectopic position of unerupted tooth [Figure 5]. OPG confirmed the acute bend of root of 21 [Figure 6].

Treatment depends on the degree of dilaceration, the relative position of the tooth & the patient's / parent's motivation. Preferred treatment is surgical exposure & orthodontic traction. In the present case, the dilaceration was so acute that orthodontic traction was not possible, so it was decided to extract the tooth.

Prior consent was taken from patient's parents. Routine presurgical investigations were carried out & surgery was done under local anesthesia. A crevicular incision was made to include two teeth on either sides & a mucoperiosteal flap was raised [Figure 7]. Bone cutting was done to expose the crown.[Figure 8]. The tooth was extracted with great care [Figure 9]. The follicle of the tooth was enucleated &

curettage was done followed by copious irrigation [Figure 11] & a clear cavity was visible thereafter.

Sutures were placed at the end of surgery to promote healing. [Figure 12].

After 1 week sutures were removed [Figure 13].

Missing tooth was replaced by removable acrylic partial denture [Figure 16].

DISCUSSION

Dilaceration is a deformity that results from a disturbance in relationship between uncalcified and already calcified portions of a developing tooth¹¹.

Trauma has been suggested as a main etiological factor^{12,13}, but many studies have found no history of trauma in some cases of dilacerations. As dilacerations have also been observed in teeth with no predecessors, hence ectopic development of tooth germs too is considered to be causative cause.

In addition, only a single central incisor is usually dilacerated; if trauma were the sole contributing factor, the adjacent incisors would also be expected to be involved.

The prognosis of dilacerated teeth is not favorable, as usually all the teeth remain unerupted.

As in the present case, the tooth remained unerupted. In this case, orthodontic eruption was not possible because of the acute bend of root & position of the tooth deep in the bone; hence extraction was preferred to prevent unfavorable sequelae of unerupted tooth.

CONCLUSION

Diagnosis of dilacerated teeth should be made as early as possible so that if extraction of dilacerated tooth is to be planned then either the space can be closed by orthodontic means or can be kept as such until the patient becomes mature enough for definitive implants or prosthodontic treatments.

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Figure 1: Extra oral view



Figure 2: Photograph showing missing permanent maxillary left central incisor



Figure 3: Photograph showing a palpable bulge in the anterior part of hard palate



Figure 4: Intra oral periapical radiograph



Figure 5: Occlusal Radiograph



Figure 6: Orthopantomogram



Figure 7: Photograph showing Crevicular incision



Figure 8: Photograph showing exposure of the crown



Figure 9: Photograph showing the extraction procedure of dilacerated tooth



Figure 10: Photograph showing the extracted tooth



Figure 11: Photograph showing the Enucleation and curettage



Figure 14: Post Operative Photograph showing healing



Figure 12: Photograph showing the suture placement



Figure 15: Post Operative Orthopantomogram



Figure 13: Photograph showing removal of the suture



Figure 16: Photograph showing Prosthetic replacement of the missing tooth

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