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Impacted incisor – A rare finding

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Abstract

When the incisors do not erupt at normal time, it becomes mandatory to find the cause behind their eruption failure and formulate an appropriate treatment plan. Impaction of maxillary permanent incisors is uncommon, but its treatment is challenging because these teeth play an important role in smile and facial esthetics of an individual. In this article we are presenting a case with impacted permanent maxillary central incisor.

Keywords: Impaction, Eruption, Esthetics, Trauma.

Case Report

A mother brought his child, boy of 11 year, to the department of Orthodontics and dentofacial Orthopaedics with complaint of missing teeth and irregularly placed upper front tooth.

Intraoral examination revealed missing central incisor and canine in second quadrant and missing canine in third quadrant. (Picture 1) Lateral incisor in second quadrant was erupting in horizontally tilted position instead of vertical eruption. Cusp tip of erupting canine in first quadrant was also seen. End on molar relationship was present on both sides.

Picture 1

On radiographic examination, panoramic radiograph showed impacted 21, 23 and 33. 21 was present horizontally and 23 is present above the root of 22 which is partially erupted. (Picture 2). Occlusal view was also taken for maxillary arch, showing impacted maxillary central incisor and canine (Picture 3).

Picture 2

Picture 3

Extra oral examination presented, pleasing, convex facial profile and competent lips. Child was physically healthy and had no history of trauma or other pathology in orofacial region.

Discussion

Normally, a tooth erupts when two third of its root formed. Tooth is considered impacted when it fails to erupt into oral cavity within the expected time.[(1)] Impaction of maxillary permanent central incisor is rare with frequency in the range of 0.006% to 0.2%.[(2)] Maxillary incisors are the teeth which are displayed during smile and speech. In individuals with missing maxillary incisors, speech difficulty has been reported, especially with the sound 'S'.[(3)] Missing maxillary incisors also look unattractive, may have an impact on self-esteem of an individual and his/her social interactions. Therefore normal eruption, position and morphology of these teeth, is very crucial to facial esthetics and phonetics and it is necessary to identify and manage the problem as early as possible.[(4)]

During early stage of development the crowns of permanent central incisors are present lingual and superior to the apices of deciduous incisors and in eruption stage, they migrate in a labial and inferior direction.[(5)] Failure of eruption of permanent central incisor can be due to various factors such as ectopic development of tooth bud, presence of supernumerary teeth, ankylosed deciduous predecessor, cyst,

odontomas, tooth malformations or dilacerations, early extraction or loss of primary teeth, mucosal barriers in the path of eruption, endocrine disorders and bone diseases.[4] Factors to be considered for successful treatment of impacted tooth are: position and direction of impacted tooth, degree of root completion, degree of dilacerations and space available for impacted tooth alignment.[6,7] Treatment options available for an impacted tooth are:

1. Extraction of impacted central incisor and restoration with a bridge or an implant.
2. Extraction of the impacted central incisor and closure of the space by substituting the lateral incisor for the central incisor with subsequent prosthetic restoration.
3. Surgical exposure of impacted incisor, orthodontic space opening and traction of the impacted central incisor into proper position.[8]

Therefore early diagnosis of delayed eruption of permanent central incisor is important. After diagnosis treatment plan is considered depending upon etiology of failure of eruption of central incisor.

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