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Case Report

SURGICAL REMOVAL OF "MESIODENS": A CASE SERIES

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ABSTRACT

Supernumerary teeth are the teeth appearing in any area of dental arch in addition to the regular number of teeth and the condition is called as hyperdontia. Such teeth are most commonly found in pre-maxillary region, such teeth when present between two central incisors are called as mesiodens. In the present paper, we have reported case reports of four cases of mesiodens that were operated surgically.

INTRODUCTION

The supernumerary tooth is an anomaly of dental eruption that is not rare to find in the clinical practice. Among the supernumerary teeth the "mesiodens" is most frequent. Shape of the supernumerary teeth may vary from conical, tueberculate, supplemental to odontome. Mesiodens is a conical type of supernumerary teeth located in the maxillary central incisor region and is generally unerupted.[1- 3] A midline supernumerary tooth in the primary dentition can cause an ectopic or a delayed eruption of permanent central incisors, which will further alter occlusion and may compromise aesthetics and formation of dentigerous cysts.[4, 5] The present article discusses cases of surgical removal of mesiodens.

CASE REPORTS

In the first cases, a 7 year old male subject reported to the department of paediatric dentistry with a mesiodens present between the central incisors. Aesthetic was the only primary concern of the patient. The pathology was detected on radiograph (**Figure 1**). The second case was of 12 year old male patient who also reported with mesiodens in between the central incisors (**Figure 2**). In the third and fourth cases, a 4 year old male patient diagnosed with presence of mesiodense during routine dental check up (**Figure 3**)(**Figure 4**). All the patients were operated surgically for removal of mesiodens. The surgeries were performed with local anesthesia (lidocaine 2% epinephrine 1:100.000), using the infiltrative technique first in the vestibular region, later in the papilla between the central incisors and finally in

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the palatal region in the nasopalatine nerve. The patient was prescribed anti-inflammatories. The sutures were removed 7 days later. Follow-up was done upto a time period of 2 years.

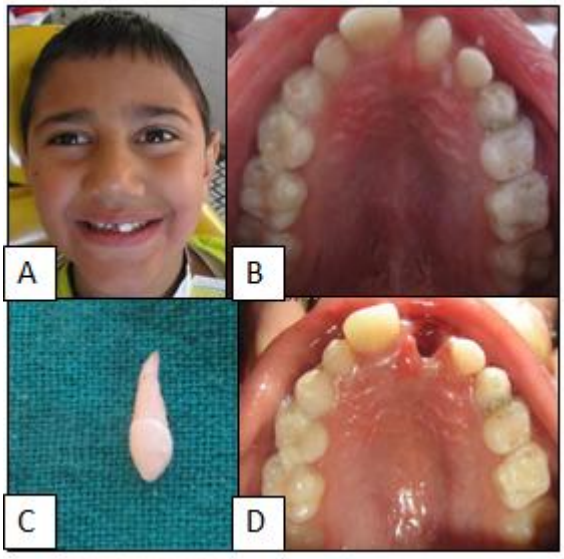

Figure 1: Case 1

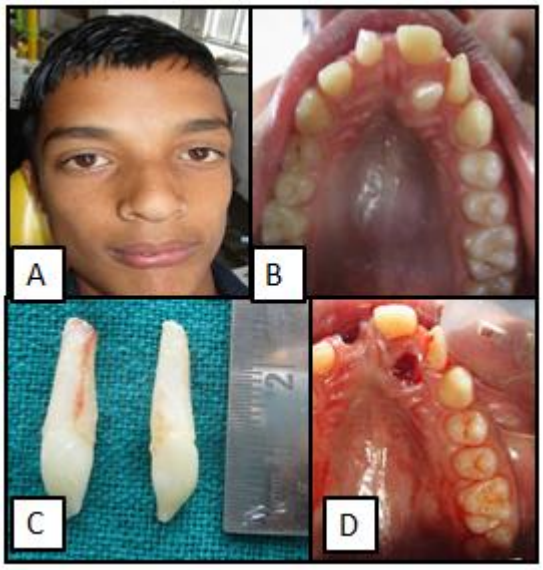

Figure 2: Case 2

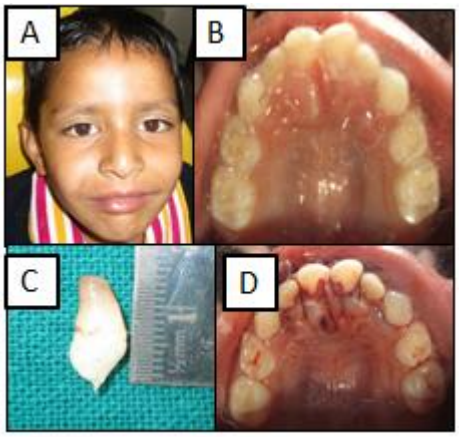

Figure 3: Case 3

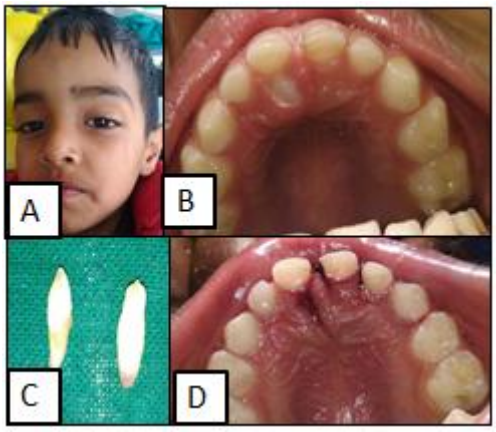

Figure 4: Case 4

DISCUSSION

Mesiodens are the most common among supernumerary teeth, located mesial to both central incisors; appearing peg shaped, in a normal or inverted position. Both dentitions are affected, but prevalence in the permanent dentition is higher than in the primary one. Many studies have shown that mesiodens affect boys more than girls (2:1); Huang et al found a sex ratio as 2.5:1 in favor of boys.[7, 8]The same was seen in the present study, in which all the cases with mesiodens were males.

Mesiodens can be classified on the basis of their occurance in the permanent dentition (rudimentary mesiodentes) or primary dentition (supplementary mesiodentes) and according to the morphology as

conical, traberculated or molariform. Supplementary mesiodentes resemble natural teeth in both size and shape whereas rudimentary mesiodens exhibit normal shape and smaller size.[9, 10] Itro A et al presented the case report of a rare symptomatic case of mesiodens and the diagnostic and therapeutic strategies to adopt when this dental anomaly occurs. In particular they suggested making radiographic examinations only in the family of patients with dental anomalies of number, thinking that the incidence of such anomalies is too low to justify mass radiographic examinations.[11]

The prevalence of supernumerary teeth in permanent teething, oscillates to 0.5-3.8%, in comparison to 0.3-0.6% that is seen in primary teething. The exact aetiology is unknown, but it has been believed that environmental factors, along with hereditary factors, in combination, cause the condition. However, the presence of multi-lobed or tuberculate forms of mesiodens in the deciduous dentition is extremely rare and not many cases have been reported in the literature.[9, 10]Limbu S et al conducted to know the radiographic characteristics and management of mesiodens in children visiting hospital. Radiographic characteristic of mesiodens including the number, shape, position, direction of crown and complication caused by mesiodens were recorded. Data were analyzed using IBM SPSS v.20.0. Out of 1871 dental records, it was found that 40 children had 53 mesiodens, with male female ratio of 3:1 and most of them were discovered at 8 years. Majority of mesiodens, 54.7% were erupted, conical, palatally placed with 77.3% vertically directed crown.Complications associated with it were crowding followed by diastema and delayed eruption. Among 40 children, one had three mesiodens, eleven had two mesiodens and rest had one each. Radiographically fully formed tooth was seen in 29 mesiodens. Immature apex was seen in 38 central incisors associated with mesiodens. Management undertaken was simple/surgical extraction and only few cases were kept for periodic observation. Periodic radiographs act as an important tool for clinicians in detecting and managing mesiodens.[12]

Nogami S et al reported the case of a nine-year-old boy presented for dental treatment and was found to have supernumerary deciduous teeth. Upon panoramic radiography, multiple impacted mesiodens were found; therefore, computed tomography (CT) was performed for further examination. One month later, the boy was referred for extraction of the deciduous supernumeraries and impacted mesiodens. They suspected that these supernumeraries, mesiodens, and remaining primary teeth would lead to problems with the eruption of the permanent teeth. Therefore, by ascertaining the exact position of the mesiodens and the successional permanent teeth using CT, extraction was performed under general anesthesia without any error. Six months postoperatively, panoramic radiographs showed no superfluous structure that appeared to be a tooth. They suggested that when multiple maxillary impacted mesiodens are found, their exact positions can be located using CT before extraction.[13] It is recommended to follow-up with regular radiographic examination. Early diagnosis minimizes treatment needs and prevents associated complications.

CONCLUSION

Under the light of above mentioned data, the authors conclude that careful clinical and radiographic assessment of supernumerary teeth and mesiodens should always be done thoroughly, for detecting their presence.

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