A Diagnosis and Treatment of the Multiple Compound Odontoma in Mandibula

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Abstract

Odontomas are classified as odontogenic tumours: however, they are thought to be developmental anomalies in which all dental tissues are represented. Compound odontomas are the most common type of odontogenic tumours and generally they are asymptomatic. The occurence of odontoma in the primary dentition is also uncommon.

This paper, describes a case of compound odontomas diagnosed in 9 years old male child who presented to the Dicle University Dental Faculty Pediatric clinic complaining about unerupted teeth. (*Journal of International Dental and Medical Research 2009; 2: (2), pp. 50-52)*

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Introduction

Odontomas are considered to be developmental anomalies resulting from the growth of completely differentiated epithelial and mesenchymal cels that give rise to ameloblasts and odontoblasts. These tumors are basically formed of enamel and dentin but they can also have variables amounts of cement and pulp tissue.[1]

Traditionally, odontomas have been classified as benign odontogenic tumors and are subdivided into complex or compound odontomas morphologically.[2] These odontogenic tumors can be found anywhere in the dental arches. The majority of odontomas which are located in the anterior region of the maxilla are compound, while the great majority of odontomas located in the posterior areas, especially in the mandible, are complex odontomas.[1,3,4]

The etiology of the odontoma is unknown.[5] In general they are asymptomatic, have slow growth[1], and seldom exceed the size of a tooth, but when large can cause expansion of the cortical bone. Odontomas occur more often in the permanent dentition and are very rarely associated with the primary teeth.[1,6]

Radiographic aspects of odontoma are characteristic. The compound odontoma shows calcified structures resembling teeth in the center of a well-defined radiolucent lesion. A developing odontoma can be discovered by routine radiography however, the degree of calcification of odontoma in the primary dentition is sometimes less than is seen in relation to permanent teeth, and radiographic features are therefore more weakly radioopaque. It is important therefore, to examine the radiographs carefully.[5,7]

Odontomas are treated by conservative surgical removal and there is little probability of recurrence.[1,8] When the odontomas are associated with unerupted teeth , orthodontic traction of the impacted tooth soon after removal of the lesion may be needed, especially if it is not diagnosed and treated early.[3,9]

CASE REPORT

9 year old boy came to Dicle University Dental Faculty department of Prdodontics with the complaint of a retantive deciduous tooth and delay of eruption. After a careful examination and anemnesis no history of a trauma was obtained. In his family history, no hypodonti or impacted tooth was reported.

On the left side of his mandible central and

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lateral deciduous incisors were retentive and canine were impacted. No carious lesions were obtained. In the clinical examination no labial or lingual position of the tooth was determined. There were a lot of radioopaque structures in incisor and canine region in periapical and panaromic radiographs. (Fig. 1) the positions of permanent lateral and canine tooth was affected by the lesion.

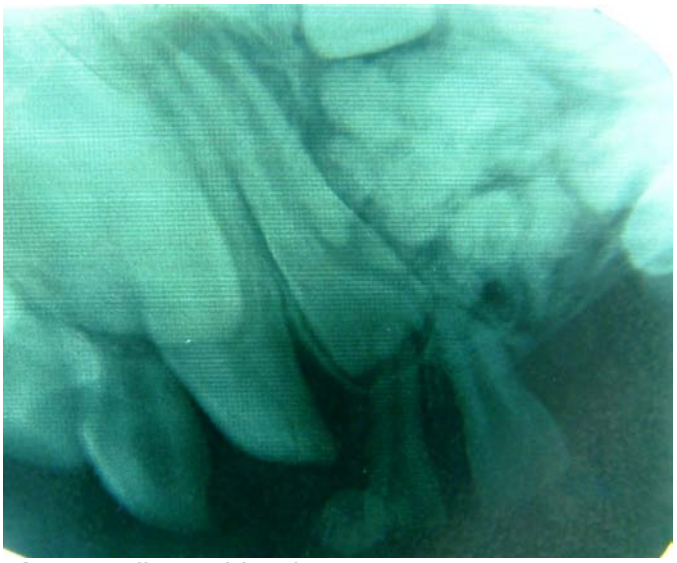

Fig. 1 Radiographic view.

After a multidisciplinary team study of a pedodontist, oral surgeon and an orthodontist surgery was planned. Without any premedication surgery was done. Small tooth like calcified pieces were excavated from the lesion region. (Fig. 2,3)

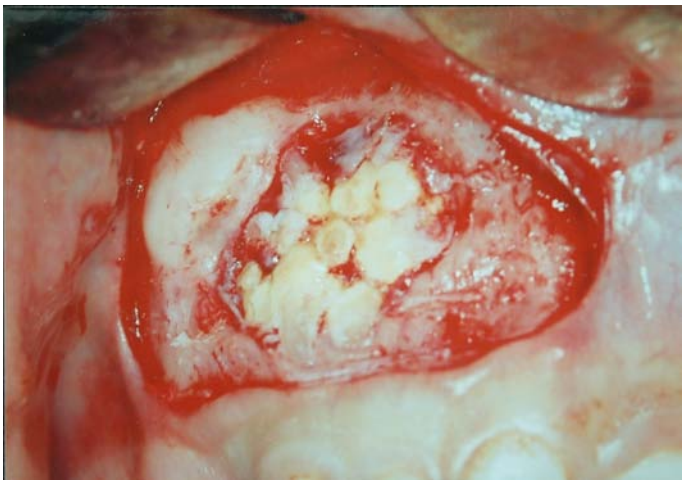

Fig. 2 Small tooth like calcified pieces.

A compound type odontoma containing enamel and dentine was reported in the pathology results. No cement was obtained.

For the guidence of eruption patient was taken into a routine appointment schedule. Surgical orthodontic treatment is planned, if needed.

Fig. 3 Small tooth like calcified pieces excavated.

Discussion

In the management of eruption disturbances in the primary dentition early recognition and diagnosis as well as proper step of treatment and careful following up are very important.

An impacted tooth is one in which eruption into a normal functional position is obstructed by some physical barrier.[10] Impaction of the primary teeth is uncommon. Factors contributing to impaction include developmental anomalies such as malposition, dilaceration, ankylosis, tumors, odontoma, dentigerous cysts, presence of supernumerary teeth and systemic-genetic interrelation such as cleidocranial dysostosis and hypopituitarism.[10,11]

Impaction of an anterior primary tooth is very rare. When it occurs it is most often associated with the presence of a supernumerary tooth or odontoma.[12] However, there have been many studies in which odontomas caused various disturbances to tooth eruption.[4,7,9,13-16] Many times, odontoma may cause disturbances in the eruption of teeth such as impaction, delayed eruption or retention of primary teeth.[11]

The most frequent cause of discovery of an odontoma is impaction of the permanent teeth with or without persistence of the primary teeth or, less frequently, symptomless swelling or accidental radiographic finding.[4] Thus it is very important for paediatric dentists to understand the clinical features of odontoma in children.

Many studies have reported that odontoma occurs most frequently during the first two decades of life.[2,4,13,17-21] Katz reported that odontomas were most commonly removed from the 11-15-year-old age group.[13] Tomizawa and Otsuka reported that 50% were in the first decade of life in 39 cases.[22] In the present study, the case was 9-year-old.

As for location, in the incidence of odontomas in the maxilla was 50.9-59.3% .[17-20] In studies by Regezi [18] and Kaugars[20] the most common location was the anterior portion (incisor and canine region) of the maxilla followed by the anterior portion of the mandible. The canines, followed by upper central incisors and third molars, are the most frequent teeth impacted by odontomas.[13] Tomizawa and Otsuka observed that the most common location was the anterior region of the maxilla.[22] Kaugars reported that the percentage of odontomas in the molar region gradually increased with each successive decade of life.[20] Katz also reported that odontomas were apparently age and location related. Those from incisor locations were diagnosed and treated at an earlier age than those from the canine or third molar regions and reported that odontomas rarely involved the primary dentition and found only five of 396 odontomas patients.[13]

In the present case, odontoma is placed in left mandibular anterior region. Left mandibular deciduous canine teeth did not erupted. Mandibular left deciduous incisors were retentive. Mandibular left permanent incisors and canine tooth were affected by odontoma. Therefore the present case is very rare.

The treatment advocated for odontomas in both primary and permanent dentition is their surgical removal and there is little probability of recurrence. Ameloblastic fibroodontomas and odontoameloblastomas show a great resemblance to common odontomas, especially in the radiographic examination. Therefore, it has been suggested that all specimens should be sent to an oral pathologist for microscopic examination.[5,8]

Conclusions

The result of pathology reports indicated that this present case is compound composite odontoma.

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