

Odontomas in pediatric dentistry: report of two cases

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Odontomas are developmental disturbances which manifest in the form of denticles or amorphous informes masses comprising all dental tissues, especially enamel and dentin, with variable amounts of pulp and cement. We describe here two clinical cases of odontomas in children, focusing on diagnostic means and the importance of early treatment of these lesions. The standard treatment for the two present cases was surgical removal.

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INTRODUCTION

Oodontomas are developmental disturbances which manifest in the form of denticles or amorphous inform masses comprising all dental tissues, especially enamel and dentin, with variable amounts of pulp and cement. Odontomas are the most common type of odontogenic tumors and account for approximately 22% of maxillary odontogenic tumors. The etiology of this tumor is still unclear, but it is known that factors such as trauma, local infection, genetic mutation or even hereditary factors can lead to the formation of this lesion. Odontomas are generally small and asymptomatic structures, but can cause expansion of the maxilla if they reach an exaggerated size. The presence of this lesion is detected by routine clinical and radiographic examination, and can be diagnosed at any age but its incidence is higher during the first decade of life. Odontomas are commonly associated with the absence of some included or non-included primary or permanent teeth.

Odontomas are classified into two types according to their morphologic, radiographic and microscopic

characteristics, (compound or complex) with intra oral radiography being an effective method to differentiate the two types. Radiographically, compound odontomas are characterized by a collection of tooth-like structures of variable shapes and sizes surrounded by a thin radiotransparent line. In general, compound odontomas are found in the anterior region of the maxilla (area of the incisors and canines), and show no racial preference in particular, with a slight predominance in males. According to Katz in 1989,¹ compound odontomas are more frequent than complex odontomas.

Histopathologic analysis of the removed specimen should be performed to help establish the definitive diagnosis. Routine postoperative clinical and radiographic follow-up is important in order to monitor eruption of the permanent tooth and to guarantee its good positioning in the arch. Orthodontic treatment can be indicated if permanent teeth are erupting ectopically. We describe here two clinical cases of odontomas in children, focusing on diagnostic means and the importance of early treatment of these lesions.

CASE 1

A 5-year-old boy presented at the Department of Pediatric Dentistry, Araçatuba Dental School, UNESP, with an unerupted maxillary left primary canine. Intraoral examination showed that the patient was in his primary dentition phase (Figure 1). The region of the missing tooth was lined with gingival tissue of normal appearance and the space was preserved. Radiographically, tooth-like radiopaque structures were observed surrounded by a radiolucent halo and circumscribed by a thin cortical plate located in the upper left alveolar region (Figure 2). The lesion showed an intimate relationship with the missing canine that was found to be impacted, but no pain was reported by the patient. Based on the clinical and radiographic aspects, the dif-

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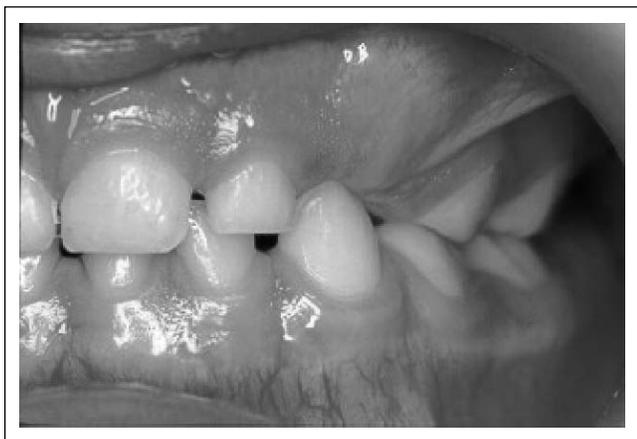


Figure 1. Clinical appearance showing absence of the maxillary left primary canine.



Figure 4. 24 months post-operative clinical aspect. Eruption of the maxillary left primary canine.



Figure 2. Radiographic aspects showing tooth-like radiopaque structures.



Figure 5. Radiographic view - 24 months post-operatively showing normal features.

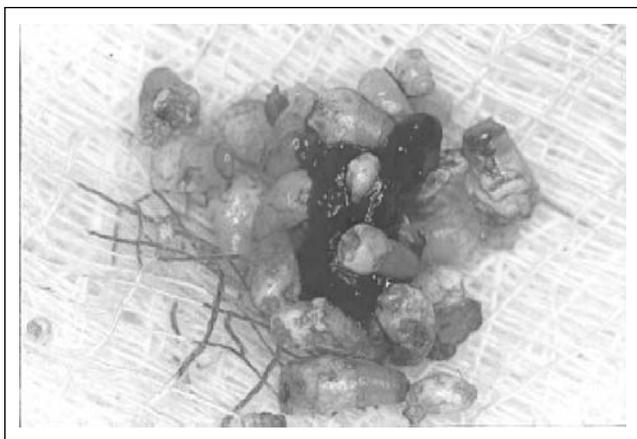


Figure 3. Clinical appearance of the lesion showing presence of denticles.

ferential diagnosis was compound or complex odontoma.

Treatment consisted of surgical excision of the lesion and clinical and radiographic follow-up. A removable appliance was installed for space maintenance. Only an analgesic was prescribed for the postoperative period

since the intervention was small and the patient was in good general health. The surgical material removed was sent for histopathologic examination, which confirmed the diagnosis of compound odontoma. The patient was submitted to frequent clinical and radiographic examination to monitor the eruptive movement of the impacted tooth and bone neoformation in the area. The involved primary tooth erupted spontaneously within 24 months as shown in Figures 4 and 5.

CASE 2

A 2-year-old boy presented with trauma and complete intrusion of the maxillary left central incisor that occurred 6 months earlier with the tooth remaining inside the tissue. Clinical and radiographic examination revealed the presence of an intruded left maxillary central incisor and suggested the presence of an odontoma in the region of the germ of the maxillary left permanent central incisor (Figures 1 and 2). Due to his young age, lack of cooperation and because the permanent teeth involved in the lesion were in the phase of mineralization, the patient was routinely followed up until reaching the appropriate age for surgical treatment.



Figure 1. Clinical appearance showing large swelling in the region of 61.



Figure 3. 4 months post-operative – clinical aspect.



Figure 2. Radiographic aspects showing tooth 61 in the inner part of the lesion (odontoma).



Figure 4. Radiographic view – 4 months post-operatively showing normal features.

Three years after the first visit, surgery for removal of the odontoma was performed and the specimen was sent for histopathologic examination which confirmed the diagnosis of compound odontoma.

The patient is currently being followed up and 15 months after surgery, eruption of the maxillary permanent lateral incisor was observed to be ahead of his central incisor counterpart, with bone neo formation in the region (Figures 3 and 4).

DISCUSSION

Among the alterations affecting the oral cavity, odontomas are frequently observed in children, with no difference in the incidence of odontomas between genders, although Miki *et al.*² reported a predilection for males. Since odontomas are mainly asymptomatic and show a slow evolution, they are generally diagnosed by

routine clinical and radiographic examination.

In one of the cases described here, the diagnosis was made on a 2-year-old patient who presented a history of trauma, as also reported by other investigators.^{3,4} Early diagnosis and intervention permit simpler treatment of odontomas and provide a better prognosis, thus preventing occlusal disturbances.³⁻⁶

In the two cases described, the lesion caused retention of the primary teeth, although retention of the permanent teeth has more commonly been reported.^{1-3,6-12} The odontomas described here were of the compound type which, according to Mac Donald Jankowski¹³ and Mc kinney,¹⁴ showed morphological similarities and the same stages of dental development and increasing progressively in size with advancing age.

Frequently, odontomas are circumscribed, encapsulated tumors that can be removed by conservative

surgery. The standard treatment for the two present cases was surgical removal. In one case, in view of the young age of the patient and the benign behavior of the lesion, we opted for clinical and radiographic follow-up until the patient had reached the appropriate age for the surgical procedure under local anesthesia. In many cases, space maintenance can be necessary after surgical removal of the lesion, and therefore a removable appliance was placed in one of the cases.

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