AMELOBLASTIC FIBROMA IN A CHILD: CASE REPORT

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ABSTRACT

Ameloblastic fibroma (AF) is a tumor made of odontogenic epithelium and mesenchymal tissues and is therefore denominated a mixed odontogenic tumor. The most common clinical manifestation is slowly increasing swelling. We report a case of a four-year-old old girl with extensive AF of the mandible. Treatment was radical enucleation. Recent evidence suggests that AF has a high rate of recurrence and, in the some cases, malignant transformation. As a result, the monitoring of cases is indispensable. The patient in the present study continues to be in follow up and has been disease free for four years.

Descritores: Ameloblastic Fibroma. Neoplasm. Odontogenic tumors. Jaw tumor

INTRODUCTION

Ameloblastic fibroma (AF) is a mixed odontogenic tumor that derives from epilthelial and mesenchymal elements of a tooth germ and is considered relatively rare. It was first reported in the literature by Kruse in 18911. AF normally affects young patients, with no predilection for sex, and is most often found in the posterior region of the mandible. In most cases, it is associated with an impacted tooth and accounts for 1.5 to 4.5% of all odontogenic tumors [1-5].

Generally asymptomatic, AFis most often discovered by routine radiographic exams and presents as a well-defined radiolucente unilocular or multilocular lesion with a radiopaque halo. When very large, it causes curvature of the bone cortex and facial asymmetry and can therefore cause discomfort[6].

The treatment indicated for AF is widely discussed in the literature and ranges from conservative to radical. Conservative treatment consists of enucleation associated with curettage of the tumor, whereas radical treatment, which is indicated in cases of recurrence due to the potential for malignant transformation[7], involves partial bone resection of the region and rigid fixation[8-10]

We report a case of a four-year-old old girl with extensive AF of the mandible. Treatment was radical enucleation. As a result, the monitoring of cases is indispensable. The patient in the present study continues to be in follow up for four years.

CASE REPORT

A white female patient, LCTB, aged four years and five months was sent to the oral-maxillofacial surgery service of Santa Genoveva Hospital in May 2013 with a complaint of a volumetric increase and facial asymmetry that, according to the caregivers, occurred after a fall from a bicycle. The extraoral examination revealed slight asymmetry and a volumetric increase on the right side of the face. The intraoral exam revealed an absence of discoloration of the mucosa in the anatomic area involved as well as an unusual bone shape, volume and surface that could be relevant. The panoramic radiograph (Fig. 1) revealed a well-defined radiolucente unilocular lesion with a radiopaque halo measuring 3x4 mm and involving the germ of tooth 46. Moreover, agenesis of the germs of the maxillary lateral incisors was found as well as an image suggestive of a supernumerary tooth in the region of tooth 22. Due to the characteristics of the tumor, the diagnostic hypotheses were ameloblastoma, ameloblastic fibroma, dentigerous cyst and keratocystic odontogenic tumor. Considering the extension of the tumor and the diagnostic possibilities, the decision was made for enucleation associated with curettage, with the removal of the affected tooth (46). Mechanical treatment of the bone surface was performed with peripheral ostectomy with the aid of multi-blade burrs.

The material was sent for biopsy for the confirmation of the diagnosis of ameloblastic fibroma. Follow up was performed at three-month intervals the first year, at six-month intervals the second year and annually thereafter. The radiographic (Fig. 2) follow up exam four years after surgery revealed characteristics of bone regeneration with no signs of recurrence. The anual follow-up evaluations will continue.

DISCUSSION

Tumors in pediatric patients are always worrisome for parents as well as draining for children and dentists. The young organism undergoes constant growth and development and therefore merits special care. A lack of cooperation during the diagnostic exams, especially on the part of very young children, often leads to the indication for general anesthesia in a hospital setting.

AF has clinical and radiographic characteristics similar to those of other odontogenic tumors and the differential diagnosis generally includes ameloblastic fibro-odontoma, odontoma and

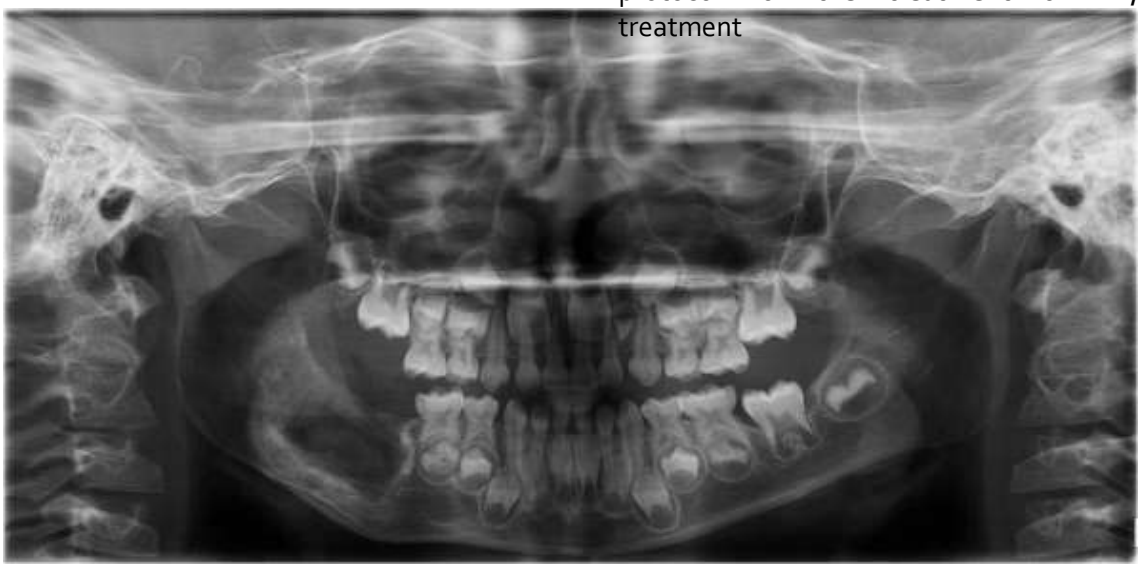

Figure 1 - Panoramic Radiograph initial.

ameloblastoma5. According to Chen and collaborators1 (2007), the posterior region of the mandible is the most common location for AF, followed by the posterior region of the maxillary. There is generally a complaint of swelling in the affected region with no pain symptoms. The eruption process of teeth located in the area can also be affected. Impacted teeth are associated with the tumor in most cases[11].

Few articles are found in the literature on AF and the best form of treatment continues to be a subject of debate. Some authors[1-3,6,9,12,13] defend enucleation with curettage of the tumor. These authors published cases of AF in which the technique they suggest was employed successfully with no cases of recurrence. However, other authors[8,10] state that mandibular resection is the best option due to the possibility of recurrence and malignant transformation.

In the case reported herein, the biopsy was performed in a hospital setting under general anesthesia due to the fact that the patient was a young child. To avoid the need for an additional surgical intervention, enucleation of the tumor was performed at the time of the surgery for the
diagnosis. Anesi and collaborators[9] (2008) state that, although there is no standard protocol for the treatment of AF, treatment should be more radical in cases of recurrence of the tumor.

Follow up after treatment should be frequent and prolonged, considering the possibility of recurrence with malignant transformation. Kobayashi and collaborators[7] (2005) report the emergence of an ameloblastic fibrosarcomain a 26-year-old patient two years after the enucleation of an ameloblastic fibroma. Therefore, patients diagnosed with AF should remain in rigorous postoperative follow up for the early detection of possible malignant transformation.

CONCLUSION

Although there is no standard protocol for the treatment of ameloblastic fibroma, enucleation and curettage with or without immediate closure is a safe, viable option provided that the patient is duly followed up both clinically and radiographically. This option should be considered, especially in the case of pediatric patients, who in the process of growth and development.

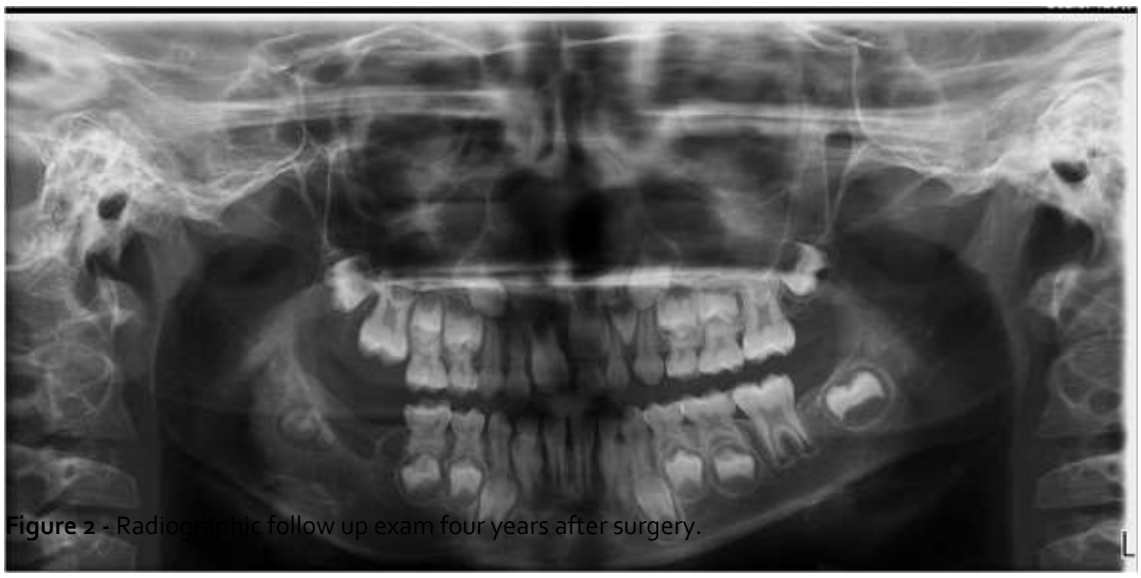

Figure 2 - Radiographic follow up exam four years after surgery.

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