Case Report

Ameloblastic fibroma in a young adult

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Abstract

Ameloblastic fibroma is a rare mixed odontogenic tumor of the jaw comprising 2.5% of all odontogenic tumors. It is most commonly seen in young adults as a gradually increasing swelling in the jaw. Treatment considered is meticulous enucleation and curettage of surrounding bone. This study presents a case of ameloblastic fibroma in a 15-year-old female patient with a swelling on the right side of the mandible which was managed by enucleation and curettage.

Keywords: Ameloblastic fibroma, ameloblastic fibrosarcoma, enucleation, odontogenic tumors

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INTRODUCTION

Ameloblastic fibroma is a rare benign, mixed odontogenic neoplasm. It accounts for 2.5% of all odontogenic tumors and 80% of it occurs in the mandible premolar–molar region. It is more common in children without any gender predilection.[1] It usually presents as a unilocular or multilocular radiolucency often associated with unerupted teeth. It is generally regarded as being less aggressive than the ameloblastoma, a feature which must be considered in the rational treatment and management of the patient with this tumor.[1,2] This study reports a case of ameloblastic fibroma in a 15-year-old patient involving the right mandible managed by enucleation and curettage.

CASE REPORT

A female patient aged 15 years reported to us with a chief complaint of missing molar teeth on the right lower back region with fluid discharge from the same side for 1 month.

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On examination, mild diffuse swelling was seen on the right angle region measuring 3 cm × 2 cm extraorally. Intraorally on examination 46, 47, 48 were clinically not seen. The gums over the molar area were inflamed and swollen, showing indentations of the upper molar teeth [Figure 1]. Serous discharge from a small opening distal to 45 was also seen. Orthopantomogram showed a huge radiolucent lesion involving the body of the mandible from distal to 45 to the ramus of the mandible [Figure 2]. Initially, incisional biopsy was done under local anesthesia and sent to histopathological examination which was suggestive of ameloblastic fibroma. Considering the age and the benign nature of the lesion, it was planned to surgically enucleate and curette the lesion under general anesthesia. All the unerupted molar teeth were removed along with the lesion and sent for histopathological examination.

Histopathology

The hematoxylin and eosin section showed highly cellular connective tissue stroma comprising odontogenic epithelium arranged in the form of strands, chords and follicles

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of varying size and shape. The strands are lined by cuboidal-to-columnar ameloblast-like cells with minimal central stellate reticulum-like cells [Figure 3]. The odontogenic follicles of varying size and shapes are lined by tall columnar ameloblast-like cells with palisading hyperchromatic nuclei and central stellate reticulum-like cells. Cystic degeneration is noticed within the odontogenic follicles in few areas. Osteodentin induction is evident; juxta-epithelial hyalinization is evident surrounding few follicles.

The connective tissue component resembles the dental papilla characterized by numerous plump fibroblasts which are angular and oval in shape in a background of delicate collagen fibers. Few areas show myxoid appearance along with stellate-shaped cells. Few endothelial-lined blood vessels of varying sizes are seen [Figure 4].

Immunohistochemistry

Odontogenic epithelial cells of ameloblastic fibroma were fully positive for cytokeratin detected by antibody KL-1. Dental papilla-like mesenchymal tissues, especially around the dental lamina, were positive for tenascin.

DISCUSSION

Ameloblastic fibroma is a mixed odontogenic tumor most commonly seen in young patients. The youngest being 7-week-old infant and the mean age of occurrence is 15 years.[3] It has no gender or race predilection. Nearly 80% of cases are seen in the mandible in the premolar–molar area.[2] The tumor enlarges gradually and is asymptomatic. The patient might complain of pain, swelling, or missing teeth. Radiographically, it can be seen as a unilocular or multilocular radiolucency with a sclerotic border associated with unerupted teeth, or displaced teeth with divergence of roots of adjacent teeth, or expansion of cortical plates.[1,2] These patients may also present with a hard swelling, but intraoral ulceration, pain, tenderness, or drainage may also be observed.[3] In our case, the patient came with a complaint of missing molar teeth and on examination showed a diffuse swelling with ulceration in the molar area with serous discharge and radiological findings of a huge radiolucent lesion, involving the body of the mandible

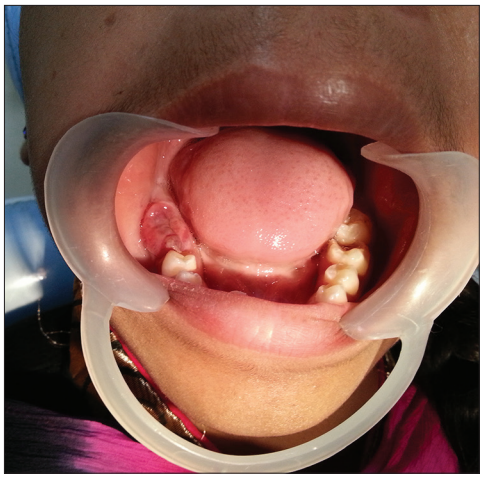

Figure 1: Intraoral photograph

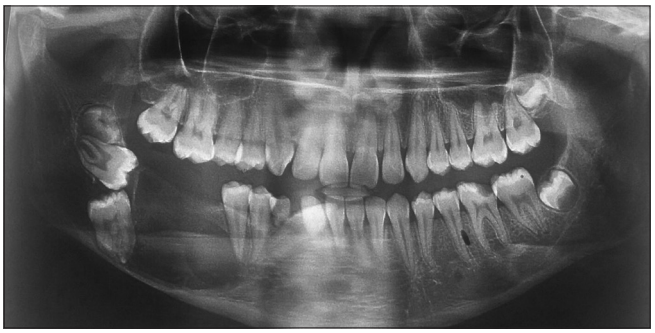

Figure 2: Orthopantomography showing radiolucent lesion with unerupted teeth

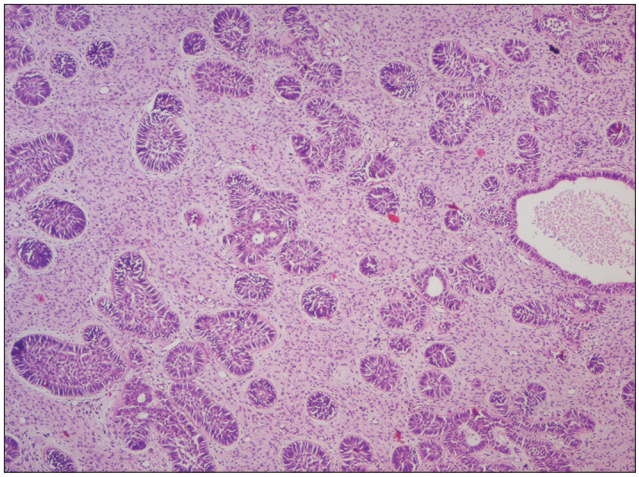

Figure 3: Slide showing highly cellular connective tissue stroma comprising odontogenic epithelium arranged in the form of strands, chords and follicles

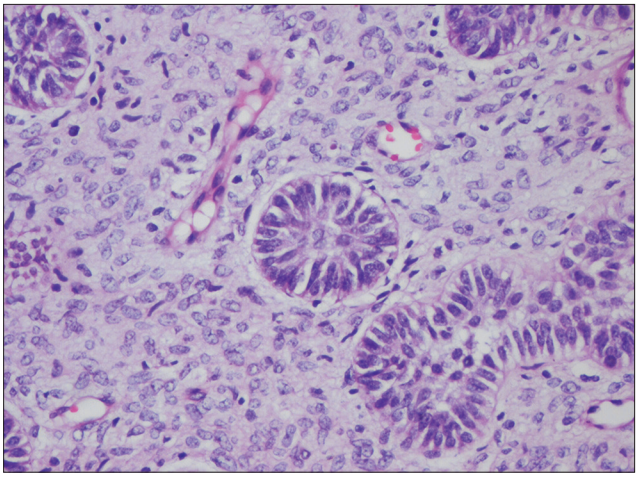

Figure 4: Columnar ameloblast-like cells with palisading hyperchromatic nuclei and central stellate reticulum-like cells. Few endothelial-lined blood vessels of varying sizes are seen

with unerupted molar teeth. Our clinical and radiological findings were nearly concomitant with the features of ameloblastic fibroma.

The treatment is enucleation and curettage because it is noninvasive and encapsulated which can be readily removed. In this case, taking into account the patient's age, we performed enucleation with thorough curettage, removing all the unerupted molars. However in extremely large and recurrent ameloblastic fibromas resection of the involved jaw and reconstruction can be considered.[1]

There is varied rate of recurrence by different authors and mostly attributed to incomplete primary removal.[1,4] Ameloblastic fibroma requires a long-term follow-up due to its chances of recurrence or its transformation into ameloblastic fibrosarcoma.[1-4]

CONCLUSION

The case presented here is typical of its features in occurrence, signs and symptoms and radiological features. It was conservatively treated by enucleation and curettage, considering the age of the patient. Whatever may be the form of treatment, concerns regarding its recurrence and its malignant transformation have to be kept in mind and require a long-term follow-up.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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