



Case Report

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Ameloblastic Fibroma of Maxilla and Maxillary Sinus A Case Report



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Abstract

Ameloblastic fibroma (AF) is a rare mixed odontogenic tumor; It occurs mainly in young individuals with no sexual or racial predilection. It arises mainly in the mandible. The treatment of AF is controversial. Some authors recommend wide excision of the tumor, while others support enucleation or curettage initially with reserving modified block resection for recurrence. In this report, we present a case of ameloblastic fibroma of the maxilla and maxillary sinus which was treated by enucleation and curettage and has been followed up for more than two years without any evidence of residual tumor or recurrence.

Introduction

Ameloblastic fibroma (AF) and related lesions are defined by WHO as neoplasms composed of proliferating odontogenic epithelium embedded in a cellular ectomesenchymal tissue resembling dental papilla and with varying degrees of inductive change and dental hard tissue formation [1].

Ameloblastic fibroma is a rare mixed odontogenic tumor; accounts for 2.5% of odontogenic tumors [2,3]. It occurs primarily in young individuals (70% of patients are younger than the age of 20 years at presentation). There is no sexual or racial predilection [4-6]. Ameloblastic fibroma arises in the mandible in most of the cases (about 80%) with remainder arising in the maxilla [4,5,7,8]. Patients with ameloblastic fibroma usually complain of swelling of the jaw, failure of tooth eruption and /or pain [2,4]. Radiographically, AF appears radiolucent multilocular or unilocular cyst with difficulty in distinguishing it from simple ameloblastoma [2,4,7].

Case Report

A 20 years old, married, Saudi female came to Oral & Maxillofacial Surgery Clinic of King Fahad Hospital- Hofuf, Saudi Arabia, complaining of pain which has started since few weeks around pointing teeth which failed to erupt in addition to swelling of the left side of the face. Swelling started five years earlier with gradual increase in size.

Medical History: Patient has no significant medical history.

Extra-oral examination showed asymmetrical expansion of left malar region and cheek. There was no ocular involvement and no regional lymphadenopathy. Intra- oral examination

showed swelling of left maxilla; expanding palatally, mesially and anterolaterally obliterating the upper left buccal sulcus from tooth # 23 to tooth # 27 region. Swelling was bony hard on all surfaces except the alveolar surface which is cystic in consistency with pointing multiple odontomes. Plain radiographs (orthopantomogram & occipitontental view) and Computerized Tomography (CT) showed well defined expansile mass within left maxilla and left maxillary sinus; with radiopaque dental tissues (odontomes) and displaced tooth # 28 (Figure 1). The lesion caused deviation of nasal septum and there was no erosion of orbital floor or displacement of ocular contents (Figures 2 & 3).



Figure 1: OPG radiograph showing an expansile mass displacing tooth # 28 & three radiopaque masses (odontomes).

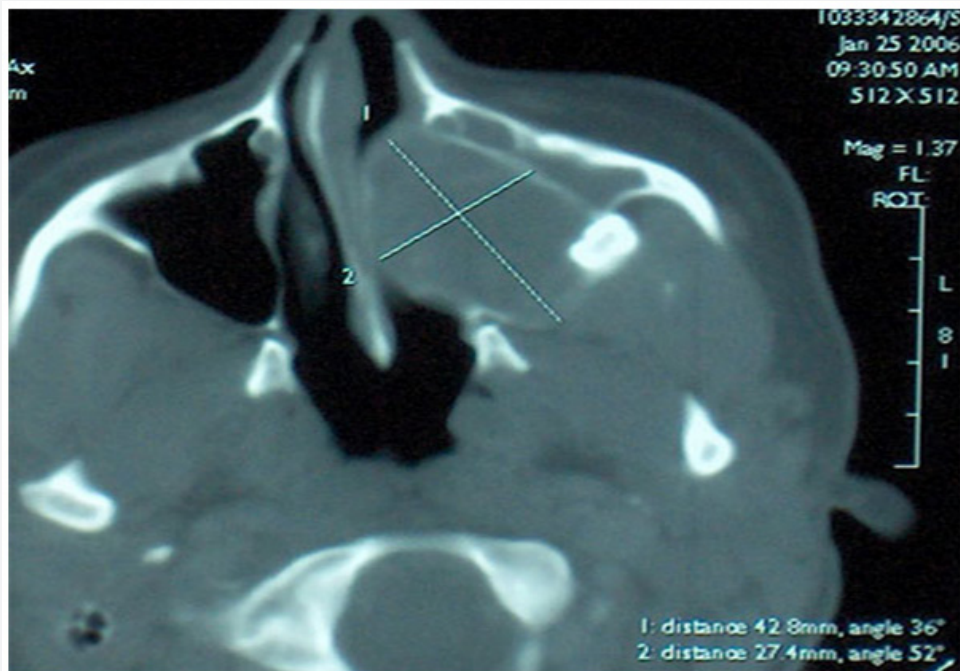


Figure 2: Axial computed tomographic scan showing a well defined opaque mass of left maxillary sinus and deviation of the nasal septum.

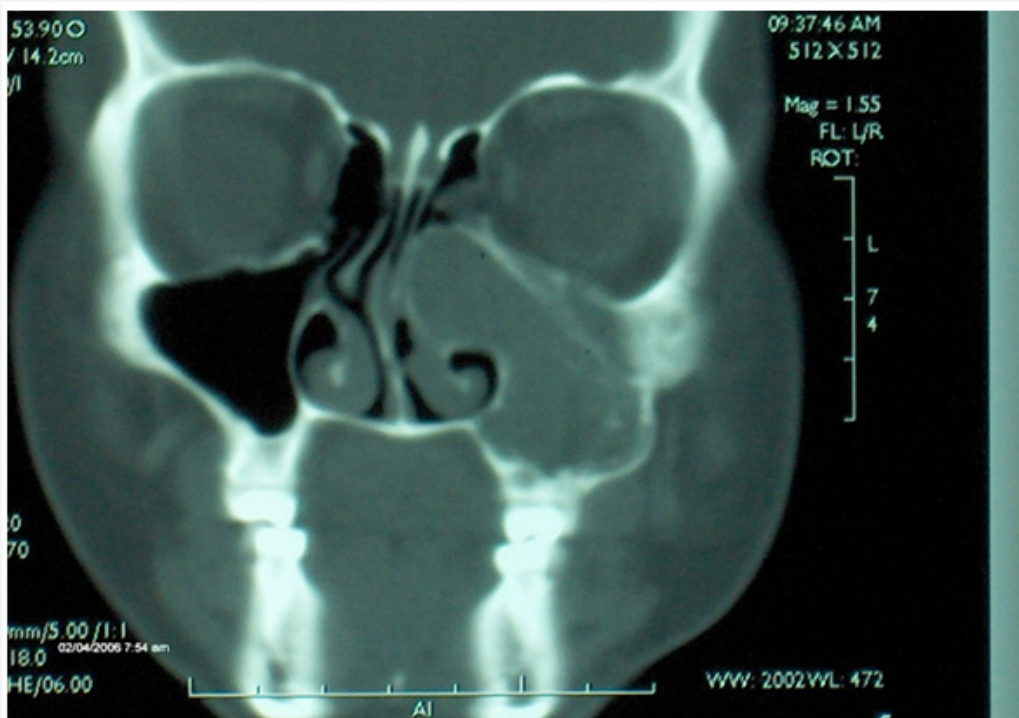


Figure 3: Coronal computed tomographic scan showing maxillary sinus walls with deviated nasal septum.

Incisional biopsy was done under local anesthesia for histopathological examination. Microscopically, the lesion showed strands and buds of epithelial cells in a very cellular connective tissue stroma (Figures 4 & 5). The cells composing the strands

of epithelium are cuboidal to columnar with presence of stellate reticulum. The microscopic findings were consistent with the diagnosis of ameloblastic fibroma

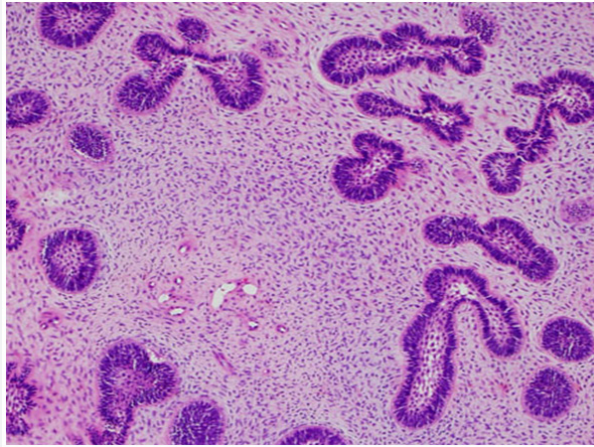


Figure 4: Low power magnification showing strands and buds of epithelial cells in very cellular connective tissue stroma.

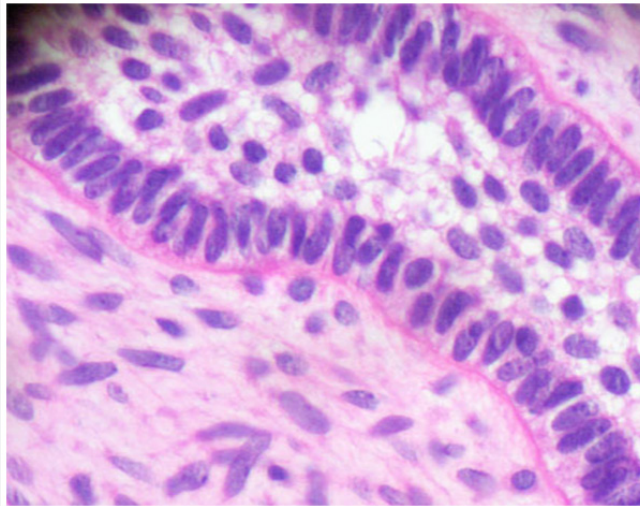


Figure 5: Higher magnification showing the epithelium which consists of ameloblast-like columnar cells surrounding others resembling stellate reticulum and connective tissue resembling the undifferentiated mesenchyme of the dental papilla.

Ten days later, excision of entire tumor was done under general anesthesia via intra-oral approach and through antrostomy. The tumor was excised by blunt dissection and curettage along with

the associated odontomes and displaced tooth # 28 (Figures 6 & 7).

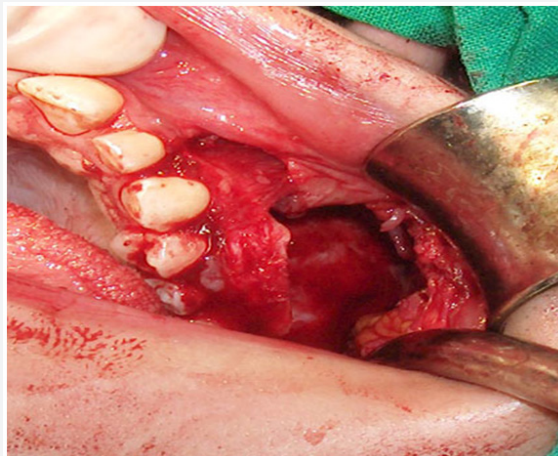


Figure 6: Showing intra-oral approach and antrostomy performed to excise the tumor.



Figure 7: showing the excised well encapsulated mass.

The patient was followed up every three months for more than two years without any evidence of residual tumor or recurrence. Tooth # 26 was deemed non-vital and was root treated (Figures 8 & 9).

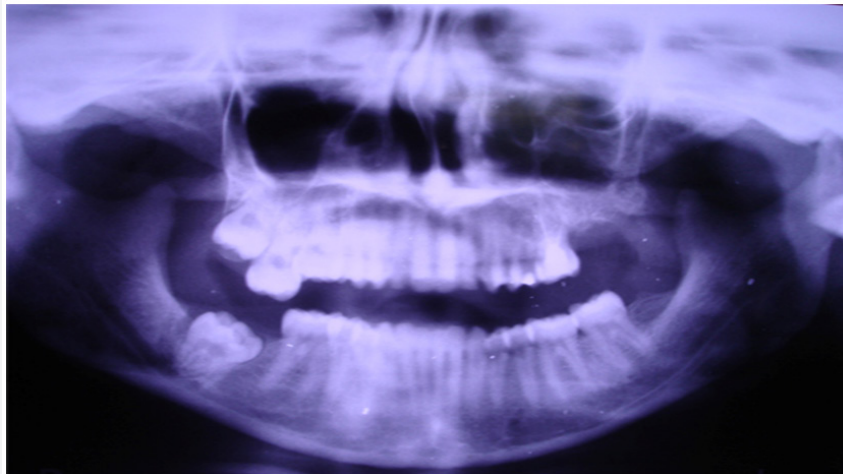


Figure 8: Orthopantomogram two years postoperatively showing bony healing of left maxilla and maxillary sinus with the endodontically treated tooth # 26.



Figure 9: Occipitomental view: shows the healing of left maxillary sinus.

Discussion

Ameloblastic Fibroma is a mixed tumor. It consists of odontogenic ectomesenchyme resembling the dental papilla and epithelium resembling dental lamina and enamel organ without dental hard tissues [9]. It is slow growing tumor which can cause bone expansion [10]. The treatment of A.F is controversial. Some authors recommend wide excision of the tumor unless the extent of surgery will result in significant deformity, [11] On the other hand, others support enucleation or curettage initially; with reserving modified block resection in cases of recurrence [3,6,12].

In this case, enucleation and curettage were performed as a conservative treatment, with complete excision involving entire tumor, involved tooth and odontomes. The recurrence rate has been reported between 18.3 and 43.5% [4,11]. Patient has been on follow up for two years without any clinical or radiographical sign of residual or recurrent disease. On orthopantomogram, sign of bone remodeling is obvious (Figure 8).

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