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# AMELOBLASTIC FIBROMA OF THE MANDIBLE MIMICKING A MALIGNANT TUMOR OF THE JAWS

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**ABSTRACT**
Ameloblastic fibroma (AF) is a rare, locally aggressive, mixed benign tumor occuring predominantly in children and young adults with no sex predilection. It usually occurs in the posterior segment of the mandible and is associated with unerupted teeth, causing a delay in eruption or alteration in the dental eruption sequence. As the aggressive clinical presentation mimicks malignancy, complete investigations play a vital role in accurate diagnosis. Here we report a case of ameloblastic fibroma in a 13 year-old male patient which clinically and radiographically masqueraded as a malignant neoplasm of jaw.

## INTRODUCTION

Ameloblastic fibroma (AF) is an extremely rare true mixed benign tumor. It is the least differentiated of the odontogenic mixed tumors in that the neoplastic elements do not characteristically produce dentin or enamel matrix, the hallmark of the more differentiated tumors. Biologically, 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]. It can occur in either the mandible or the maxilla, but is most frequently found in the posterior region of the mandible. It usually occurs in the first two decades of life and is associated with tooth enclosure, causing a delay in eruption or altering the dental eruption sequence [2].

## CASE REPORT

A 13-year-old male patient presented to the Department of Oral Medicine and Radiology, RMDC&H, Annamalai Nagar with a swelling in the right lower third of the face for the past 20 days and also complained pain in the swelling for the past 4 days.

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History of presenting illness revealed that swelling was sudden in onset 20 days before, rapidly progressed in size and caused pain for the past 4 days. The swelling was not associated with trauma and previous history of tooth pain. There were no relevant medical, surgical and dental histories. Family history was not contributory.

On extraoral examination, single diffuse swelling (Figure 1) seen over the right body of the mandible, firm in consistency and tender. Right submandibular lymphnode was palpable, which is single, hard in consistency, freely movable and tender. On intraoral examination, right lower buccal vestibule was obliterated due to the presence of diffuse swelling (Figure 2), which was hard in consistency and tender. Buccal cortical plate expansion was evident. 47 were lingually displaced. Periodontal pocket and tender on percussion and grade I mobility were present in relation to 47.

Considering the positive findings, younger age, fast growing and symptomatic swelling, hard consistency and displacement of tooth, we provisionally suggested a case of osteosarcoma of mandible.

The initial panoramic radiography and lateral oblique projection of right ramus view revealed a well-defined radiolucent region, which contained an irregular radiopaque mass which is 1 cm in diameter (Figure 3).

This lesion occupied a zone from the lower right second molar area to the left ramus. The computed tomography of both axial and coronal sections showed an expansile well-circumscribed lesion containing a calcified mass compatible with odontogenic tissue (Figure 4).

Incisional biopsy was done and microscopically the specimen showed thin strands of odontogenic epithelium consisting of peripheral ameloblast like cells and central stellate reticulum like cells in an immature connective tissue made up of primitive ectomesenchyme like cells appearing of varied sizes and shapes which was suggestive of ameloblastic fibroma.

Based on the clinical, imaging, and microscopic data, a diagnosis of ameloblastic fibroma was established. Partial mandibular resection was performed. The patient was advised to report every six month for follow up.

## DISCUSSION

Ameloblastic fibromas are rare and comprise approximately 2% of odontogenic tumors. The tumors are considered a tumor of childhood and adolescence and occur almost exclusively in the first and second decades of life [2].

The most common location for the tumor is the posterior mandible, followed by the posterior maxilla and associated with enclosed teeth [3].

It is a painless slow growing tumour [4]. The radiographic appearance may vary from a small unilocular lesion to an extensive multilocular lesion [5]. Bone expansion and tooth dislocation are common findings. Microscopically, the lesion is composed of strands, cords, and islands of odontogenic epithelium embedded in a cell-rich, primitive ectomesenchyme resembling the dental papilla [4].

Surgical excision or thorough curettage with removal of affected teeth is the treatment of choice. The recurrence rate varies among sources, but is considered to be low. While uncommon, the possibility of malignant transformation of ameloblastic fibroma into ameloblastic fibrosarcoma is well documented [4,6].

**Figure 1. Extraoral photograph showing a single diffuse swelling over the right body of the mandible**

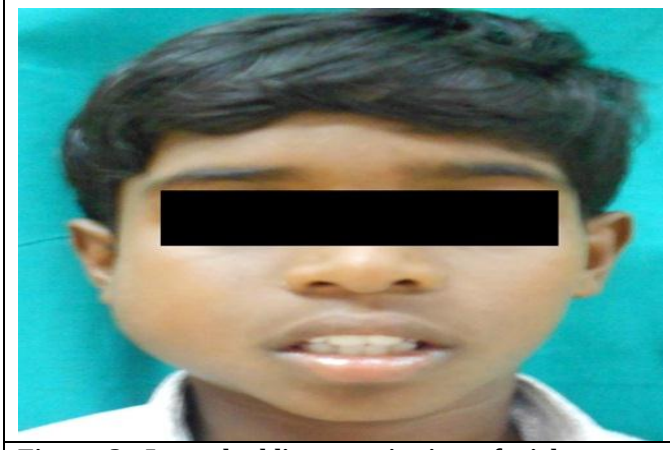


**Figure 2. Intraoral photograph showing obliteration of the right lower buccal vestibule due to the presence of diffuse swelling**

**Figure 3. Lateral oblique projection of right ramus revealing a well-defined radiolucent region, and containing an irregular radiopaque mass which is 1 cm in diameter**

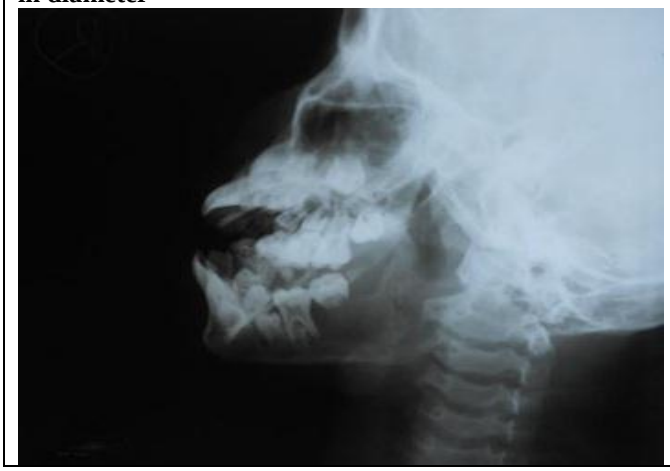


**Figure 4. CT showing an expansile well-circumscribed lesion containing a calcified mass.**

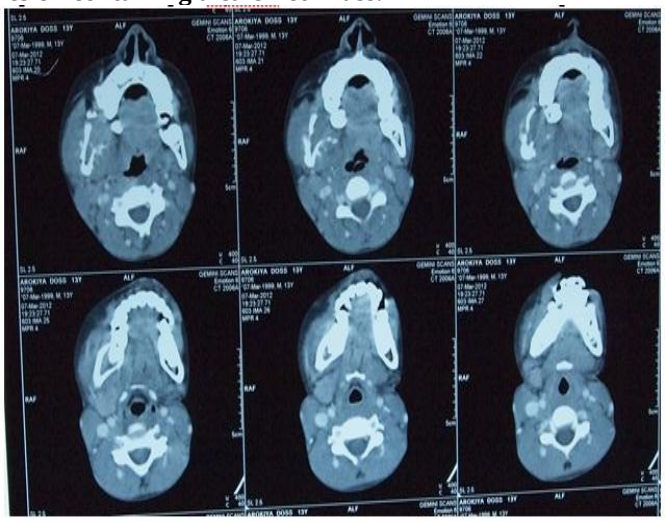
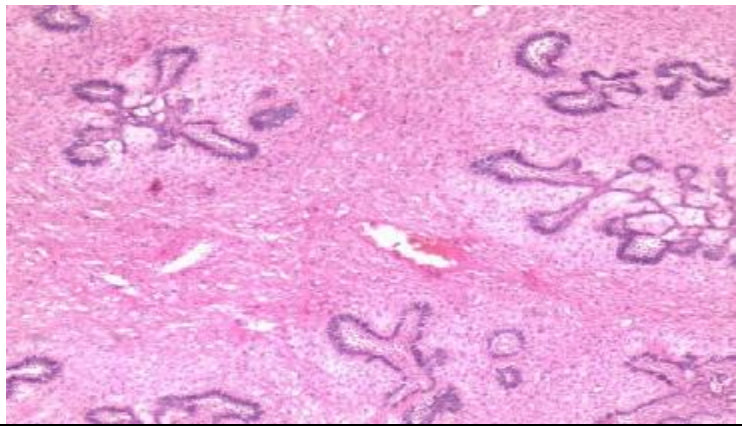


**Figure 5. Photomicrograph showing thin strands of odontogenic epithelium consisting of peripheral ameloblast like cells and central stellate reticulum like cells in an immature connective tissue made up of primitive ectomesenchyme like cells (10X)**



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