

## Ameloblastic Fibro-Odontoma of Mandible in a 10 Year Boy-A Case Report

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### Abstract

**Background:** Ameloblastic fibro-odontoma (AFO) is an uncommon mixed odontogenic tumour with 0 - 3/4% prevalence and composed of enamel and dentine. We will introduce this rare case with interesting radiologic appearance.

**Case Presentation:** Our case was a 10 years old boy who referred with a dull mandibular pain for 3 months. On physical examination there was an unerupted mandibular tooth at the right first large molar region without point tenderness associated with depression of superior border on palpation.

On Orthopantomography (OPG) imaging a lytic well-defined border lesion was detected that located on an unerupted tooth at the alveolar margin of the first molar at right side of mandible. The patient underwent surgery with differentiation diagnosis of Complex odontoma, dentigerous cyst, Odontogenic Keratocyst cyst (OKC). Microscopic examination revealed a mixed epithelial-mesenchymal odontogenic neoplasm composed of anastomosing cords and nests of epithelial cells resemblance stratum reticulare of dental enamel origin embedded in myxoid stroma including spindle cells. Areas of enamel and dentin like structures were also present. Diagnosis of Ameloblastic Fibro-odontoma was made. No recurrence through six months later follow up was detected.

**Conclusion:** Mixed odontogenic tumors are rare benign lesions with interesting various presentations that are associated with a wide differential diagnosis and regarding the radiologic appearance and sometimes clinical presentation we can narrow our diagnosis.

**Keywords:** Ameloblastic Fibroodontoma; Mandibular; Maxillary; Neoplasm; Odontogenic Tumor

### Introduction

Ameloblastic fibro-odontoma (AFO) categorized as a benign rare tumor according the WHO 2005 classification with 0 - 3/4% prevalence. They composed of enamel and dentine tissue and could usually occurs in mandible and maxilla. This is a mixed odontogenic lesion more common in the first and second decades of life with peak age 8 - 12 years.

Most times they are asymptomatic and on OPG present with heterogeneous unilocular lytic lesion with some internal dense material. Here we plan to describe a case with interesting radiologic appearance that diagnosed as AFO according to the pathology result.

### Case Presentation

Our case was a 10 years old boy who referred with a dull mandibular pain for 3 months. On physical examination there was an unerupted mandibular tooth at the right first large molar region without point tenderness associated with depression of superior border on palpation.

No serious past medical history or history of trauma was present.

On Orthopantomography (OPG) imaging a lytic well defined border lesion was detected that located on an unerupted tooth at the alveolar margin of the first molar at right side of mandible (Figure 1). The patient underwent surgery with differentiation diagnosis of Complex odontoma, dentigerous cyst, Odontogenic Keratocyst (OKC).



**Figure 1:** There is a lytic well-defined border unilocular lesion along the first right molar tooth of mandible. There is an unerupted tooth beneath lesion.

Surgical procedure with curettage was done for right mandibular lesion.

On macroscopic description, multiple pieces of soft and bony tissue totally 1.5 X 1 X 0.5 cm in formalin were sent.

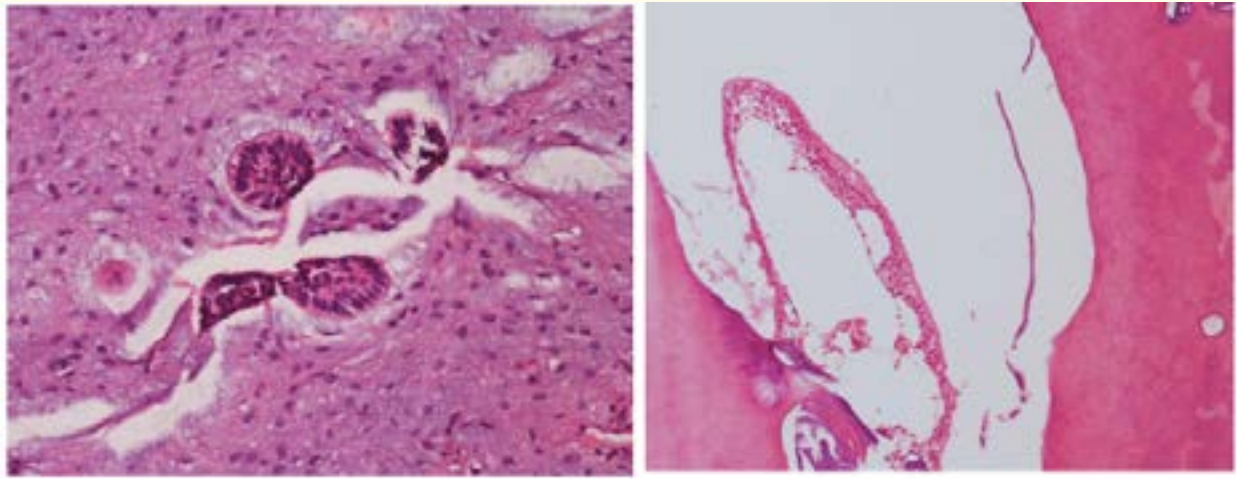
Pathology revealed anastomosing cords with ameloblastic features including peripheral palisaded columnar cells and loosely arranged central cells (stellate reticulum like areas) in a myxoid background and in close relation with areas of enamels and dentine. These findings were consistent with ameloblastic fibro-odontoma (Figure 2a and 2b).

Through 6 months follow up resection, no recurrence was found.

### Discussion

Mixed odontogenic tumors consist of a group lesions and sometimes there are some major problems in diagnosis of them [1].

Ameloblastic fibro-odontoma (AFO) is one of these lesions that previously named ameloblastic odontoma. It composed of dental epithelium implanting in an ectomesenchymal tissue like a dental papilla with different amounts and severity.



**Figure 2:** (A): Islands of odontogenic epithelium with peripheral palisading embedded in primitive like ectomesenchymal stroma. (B): Formation of dental hard tissue in close proximity of follicular epithelium.

According to the last WHO classification, in contrast to ameloblastoma, AFO is a rare noninvasive benign tumor in adolescence in first and second decades of life (peak age from 8 - 12 years) and in spite of benign behavior, malignant transformation to ameloblastic fibrosarcoma have been rarely reported. The lesion could occur in maxilla and mandible and in female or male with similar frequency [1-3].

They usually present with gradual painless swelling or incidentally in work op for teeth caries or secondary to delayed tooth eruption. They usually present in posterior portion of maxilla and mandible [4].

On plain radiography they usually present with a lytic unilocular mass with variable degree of radio-opaque and dense internal components mostly located on the crown of unerupted tooth.

Pathology reveals a benign lesion consist of odontogenic epithelium with ectomesenchymal tissue with various degree of hard tissue formation [5,6].

Differential diagnosis of AFO are wide and regarding the radiography appearance and clinical presentations are different and include immature complex odontomas, odontoameloblastomas, ameloblastic fibrodentinomas and sometimes OKC or Dentigerous cyst.

In small size lesions, it can be treated with curettage and enucleation, however in destructive lesions, surgical resection with partial maxillectomy or mandibulectomy could be considered.

In this article we presented a rare case with interesting radiologic finding and clinical appearance [7].

## Conclusion

Mixed odontogenic tumors are rare benign lesions and manifest with different presentations and according to the radiologic appearance, Differential diagnosis could be narrowed.

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