

# Radioclinical Spectrum in Ameloblastoma in 3 Patients

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**Abstract:** Ameloblastoma is a slow growing benign but locally aggressive epithelial odontogenic neoplasm. It arise from ameloblasts, which are part of the odontogenic epithelium, responsible for enamel production. It represents 1% of all tumours of the jaw bone seen in 3rd -5th decade with no gender predilection. In 80% of cases, it is localized in the mandibular molar and sometime maxilla. When the maxilla is involved, the tumor is located in the premolar region and can extend up into the maxillary sinus. It is mostly associated with an unerupted tooth. It can be treated by enucleation, bone curettage or wide resection. The rate of local recurrence is high when it is treated inadequately. We have described the clinical and radiologic behavior of ameloblastoma in 3 patients.

**Keywords:** Ameloblastomas, mandible, root resorption, malignancy

## 1. Introduction

Ameloblastomas are benign tumours which are locally aggressive and can severely disfigure face if left untreated. They usually arise from mandible near its angle, but can less commonly arise from maxilla as well. They are most commonly seen in 3<sup>rd</sup> to 5<sup>th</sup> decade of life.

## 2. Material and Method

A retrospective study was done on HPE proven cases of ameloblastomas in 3 patients in year 2020. The dental radiographs and computed tomograms formed the basis of the present study followed by HPE. The descriptive data of these patients was evaluated and compared with previously documented data in the literature. The study variables included age, gender, site of lesion, type, radiographic appearance, neurovascular bundle, and root resorption.

## 3. Results

In our study, the patients affected with ameloblastoma were in the age range of 22-56 years, with a mean age of 35.5 years. Among these 3 cases, the mandible was the most affected jaw in all 3 patients. In the mandible, the ramus was involved in two cases. The multilocular and unilocular type of ameloblastoma was noted in 2 (66.6%) and 1 cases (33.3%), respectively. Root resorption was seen in all cases.

## 4. Discussion

Ameloblastoma originates from residual odontogenic epithelium, mainly from dental lamina that fails to regress during the embryological period. They are commonly described as polymorphic tumours. [2, 3]

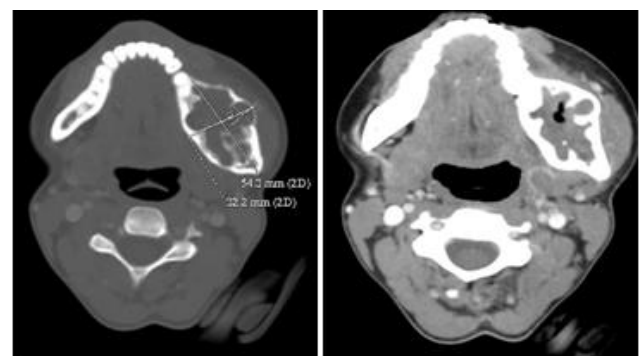
The WHO classifies ameloblastoma in four main variants: 1. solid/multicystic ameloblastoma, 2. unicystic ameloblastoma (both central tumours that develop within the bone), 3. peripheral/extraosseous ameloblastoma that develop on the alveolar mucosa and 4. desmoplastic ameloblastoma. [1] Malignant transformation may occur (2-5%). Recognised variants of malignant transformation include: ameloblastic carcinoma, ameloblastic fibrosarcoma and malignant ameloblastoma.

Depending on their radiological appearance four patterns are described: unicystic, spider-web, soap-bubble/honey-comb and solid.

Classic findings include: expansile, lucent uni- or multilocular cysts with variable thickness septa giving rise to a honey-comb, soap-bubble or bunch-of-grapes appearance.

Lesions can cause cortical destruction, invade surrounding soft tissues and erode adjacent dental roots (a characteristic denoting aggressive and malignant behaviour). [4] Computed tomography may give a better appreciation of cystic and solid areas that strongly enhance with intravenous contrast fluid. Tumours are often 2-8mm larger than they appear radiographically and the diagnosis is usually made when their size is >2 cm. Magnetic resonance imaging aids by evaluating intra and extraosseous extension, with avid contrast enhancement in solid components including papillary projections, the wall and internal septa.

Features suspicious of malignancy include: large solid enhancing component, papillary projections, the wall and internal septa.



33 years old male with CT face images showing lytic expansile lesion in ramus of mandible with cortical thinning and septations

## References

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