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## RESEARCH ARTICLE

### UNICYSTIC AMELOBLASTOMA OF MANDIBLE: A CASE REPORT

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#### ABSTRACT

Ameloblastoma is most common tumor of odontogenic origin. Ameloblastoma has high rate of recurrence and are abominable for their fast growth. Unicystic ameloblastoma has several clinic-radiographic, histological types. Here we are presenting a case report of a 19 years old male patient.

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## INTRODUCTION

The ameloblastoma is derived from remnants of dental lamina and it can arise from the lining of the dentigerous cyst (Wadhawan, 2016). It is a slow-growing, persistent and locally aggressive neoplasm of epithelial origin, affecting the posterior area of lower jaw in 80% of cases (Gabhane, 2011). In 1977 Robinson and Martinez was described unicystic ameloblastoma. It reports for 10-15% of all intra osseous ameloblastomas. A large monocystic cavity with a lining, but occasionally consists of odontogenic (ameloblastomatous epithelium) and well defined border is a classic macro- and microscopic appearance of unicystic ameloblastoma.

Histologically unicystic ameloblastoma classified into 3 groups by Ackermann (Nagalaxmi, 2013 and Thankappan, 2008):

**Group I**—Tumor confined to the luminal surface of the cyst (luminal Unicystic ameloblastoma)

**Group II**—Nodular proliferation into the lumen without infiltration of tumor cells into the connective tissue wall (intraluminal/plexiform Unicystic ameloblastoma).

**Group III**— Invasive islands of ameloblastomatous epithelium in the connective tissue wall not involving the entire epithelium (mural Unicystic ameloblastoma) Radiographically, it appears as unilocular radiolucency present in mandibular region with well demarcated sclerotic borders and thinned occasionally perforated if the lesion is large and causing root resorption.

## CASE REPORT

A 19-year-old male reported to department of Oral Medicine, Diagnosis & Radiology, with the chief complaint of bony hard swelling with respect to the left posterior mandible since two months. The general health and medical history of the patient were not relevant. Extra oral clinical examination of the patient was notable for facial asymmetry (Fig 1) and a firm swelling seen on below the left body of mandible antero-posteriorly from 2 cm away from mid portion of chin area to about 1 cm anterior to the posterior border of ramus. Superio-posteriorly from inferior border of mandible to 3 cm away from clavicle (Fig 2 and 3) with measuring 2 × 2 cm round in shape with overlying surface was similar to adjacent skin. On palpation

swelling was of a large non-tender, non-compressible hard in consistency. No lymphadenopathy was noted.



**Fig.1. Front profile picture showed facial asymmetry**



**Fig. 2. A Nodular swelling below the left inferior border of mandible**



**Fig. 3. Swelling of size 2 x 2 cm round in shape below the left inferior border of mandible**

On intraoral examination, mandibular left buccal vestibule in region of third molar was obliterated and covered by mucous membrane which was normal. Also, mandibular third molar on left side was covered by pericoronal flap and was lingually tilted. Then we did radiological investigation include:

- Intraoral periapical radiograph
- Mandibular lateral occlusal radiograph
- Panoramic radiograph



**Fig. 4. Intraoral picture showed obliteration of mandibular left buccal vestibule**

Intraoral Periapical radiograph demonstrating unilocular radiolucent lesion in the left mandible along with external root resorption of posterior teeth. It presented as a unilocular radiolucent lesion on left side of mandible about 3 x 2 cm, extending from the root of first molar anteriorly to the mid ramus area posteriorly with scalloped border (Fig 5 and 6) The lesion also caused a displacement of the left inferior alveolar canal toward the cortical inferior border of the mandible. So the lesion was large in IOPA to see expansion of cortical plate we did mandibular lateral occlusal radiograph to rule out expansion of cortical border.



**Fig. 5. Radiolucency extending from mesial root of 36**



**Fig. 6. Radiolucency extending upto distal root of 38**

Mandibular lateral occlusal radiograph, demonstrating expansion on lingual side in the left mandible along with thinning of lingual cortical border in posterior area (Fig. 6).



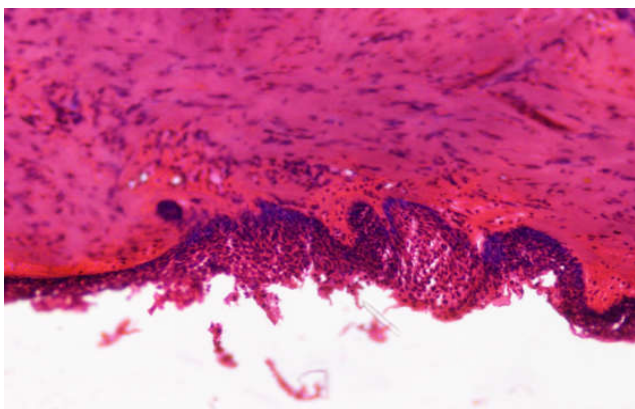
**Fig. 6. Mandibular lateral occlusal radiograph showed thinning of lingual cortical border in left posterior area**

On panoramic radiograph revealed that a single unilocular radiolucency present at left side of posterior region extending from mesial root of 36 upto 3 cm distal to 38 in ramus of mandible of size 4x5 cm approximately with scalloped border anteriorly and irregular border posteriorly with thinning of cortical plate (Fig 7).

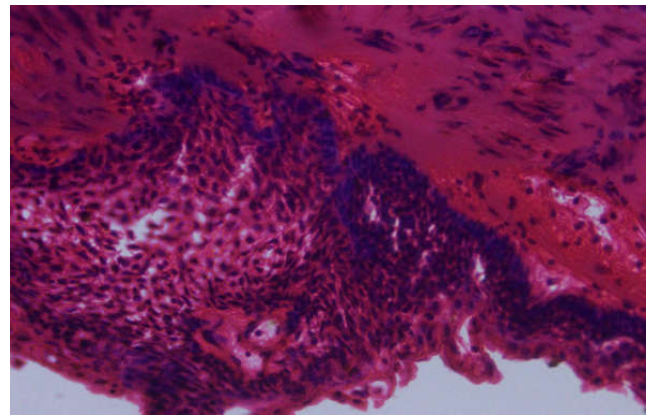


**Fig. 7. Panoramic radiograph showing extensive lesion in left posterior region**

Incisional biopsy was performed. The histopathologic examination revealed Unicystic ameloblastoma contrary to the provisional diagnosis of radicular cyst.



**Fig. 8 H & E stained sections on low power view showed epithelium and connective tissue**



**Fig. 9. H & E stained sections on high power view showed epithelium and connective tissue**

The basal cell layer is made up of tall columnar ameloblast like cells with steallate reticulum like cells. The underlying connective tissue is made up abundant mature collagen fibre bundles and moderate plasma cell lymphocytic infiltration.

## DISCUSSION

Ameloblastoma account 1% of all cyst /tumors of jaws. It is benign, confined enterprising odontogenic neoplasm. It involve 18% of all odontogenic neoplasm. The term Unicystic Ameloblastoma. was adopted in the second edition of the international histologic classification of odon togenic tumors.

In 1977 Robinson and Martinez was described Unicystic ameloblastoma. It accounts for 10-15% of all intraosseous ameloblastomas. A large monocystic cavity with a lining, but occasionally consist of odontogenic (ameloblastomatous epithelium) and well defined border is a classic macro- and microscopic appearance of unicystic ameloblastoma. Histologic appear that mimic the lining of dentigerous or radicular cyst. Pathologic mechanisms for the evolution of UA are divided as follows:

- The reduced enamel epithelium associated with the developing tooth undergoes ameloblastic change with subsequent cystic transformation.
- Ameloblastomas arise in dentigerous or other types of odontogenic cysts in which the neoplastic ameloblastic epithelium is preceded temporarily by a non-neoplastic stratified squamous lining.
- Solid ameloblastoma undergoing cystic degeneration of ameloblastic islands with subsequent fusion of multiple microcysts and then into a unicystic lesion.

According to this classification, our case study belongs to Group III Unicystic ameloblastoma (UCA) is a rare type of ameloblastoma, accounting for about 6% of ameloblastomas. It usually occurs in a younger age group of 16–20 years, with about 50% of the cases occurring in the second decade of life as in our case .Most common site for unicystic ameloblastoma is mandible in posterior region followed by parasymphaseal region and less posterior maxilla. Clinically unicystic ameloblastomma is asymptomatic, if it is large it may cause facial asymmetry. radiographically it may divided into unilocular and multilocular. Radiographically, it appears as unilocular radiolucency present in mandibular region with well demarcated sclerotic borders and thinned occasionally perforated if the lesion is large and causing root resorption.

**Conclusion**

Unicystic ameloblastoma it is a tumor confined enterprising recurrence, in an endeavour to rule out whether ameloblastoma has perforate the wall of the cyst or not the Pathologist should examine the tissue sections carefully so that the complications can be minimized.

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