Case Report on Follicular Ameloblastoma

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INTRODUCTION

Ameloblastoma is a rather rare tumour occurring in the jaws. It is first described by Falkson in 1879 but Churchill has given the term 'Ameloblastoma' in 1933.[1] Odontogenic lesions develop from odontogenic epithelium. Ameloblastoma, radicular cyst, dentigerous cyst, keratocystic odontogenic tumour are the example of Odontogenic epithelial origin lesions. Ameloblastoma is a neoplasm of odontogenic epithelium which is slow growing painless tumor occurs mainly into mandible.[2]

The ameloblastoma is divided into three clinicopathological groups. These are: solid or multicystic; unicystic; and peripheral (extraosseous). The distinction between these variants of ameloblastoma is important clinically.

Solid and multicystic ameloblastomas are the common form of ameloblastoma which makes up approximately 86% of the lesions.[3]

Ameloblastoma accounts for approximately 10% of all odontogenic tumors that occur in the maxilla and mandible (Becelli et al., 2002; Zemann et al., 2007).[4] The tumour is known for local recurrence, especially if soft tissue invasion or cortical bone perforation has occurred.[5] It occurs mainly in 2nd to 3rd decade of life; the average age for occurrence is 30 to 40 years of age.[6]

Case Presentation:17 years old male patient presented in our unit, complaining of painless swelling in the floor of the mouth involving lower first molar to molar region **(Fig. 1& 2)**. Patient was asymptomatic before 1 year, he met an accident with motorcycle and developed ulcer at the mandibular site which started growing rapidly, patient has taken antibiotic coverage and swelling was subsided but it developed again after 3 months of the accident. The swelling was hard, painless to palpation and covered by normal mucosa.

Radiographic Examination: In this patient, the panoramic radiograph demonstrates 83x52 mm^2 multilocular, cystic appearing. There is discontinuity of the mandible at the inferior border.**(Fig. 3).**

CT scan Report: Computerized tomography showed an expansive multiloculated bony cystic lesion measuring approximately (83x52x55) mm^3 with multiple thick enhancing internal separations and calcification is arising from body of mandible causing significant thinning of overlying cortex **(Fig. 4 & 5).**

Biopsy Procedure: Biopsy performed under Local anesthesia. Incision taken at the anterior region of mandible and large tissue sample collected. Wound closed with simple interrupted sutures.

Histopathological Examination: Microscopically in the low power view it shows epithelial island which looks like enamel organ. Tall columnar cells are present surrounding these islands and at the high power view island are showing toll columnar cells with the reverse polarity, which are Ameloblast cells. This gives hint of a diagnosis of Follicular ameloblastoma.**(Fig. 6 & 7).**

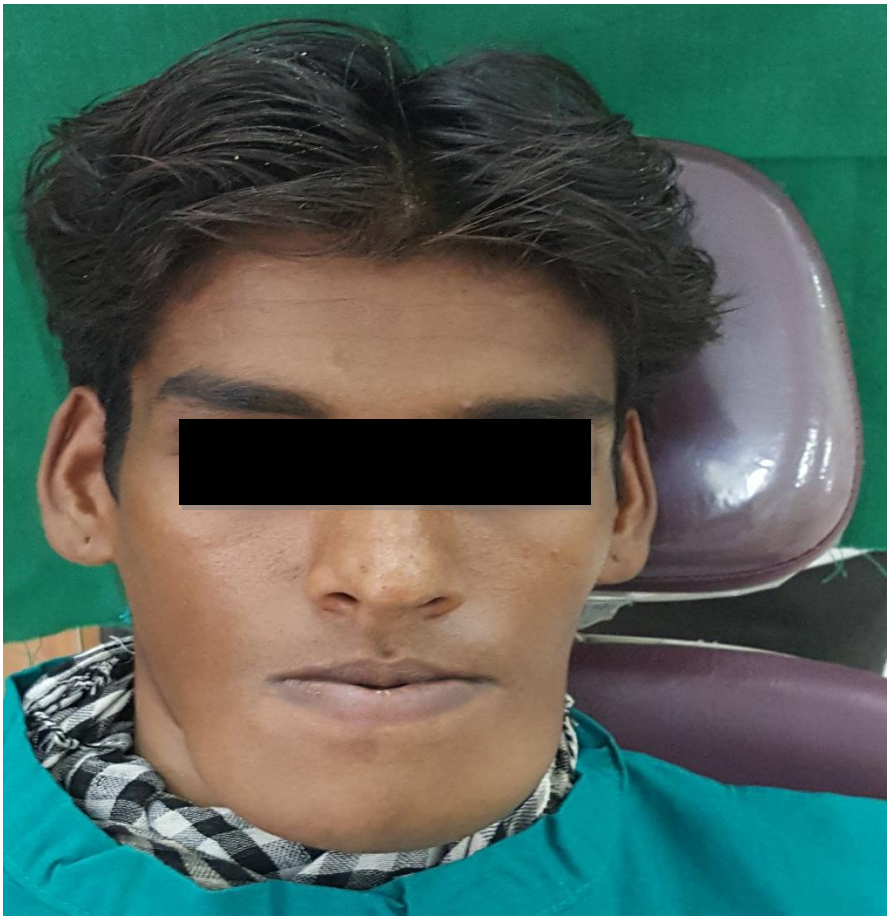

Fig. 1: Extra oral photograph showing bony hard swelling and facial deformity.

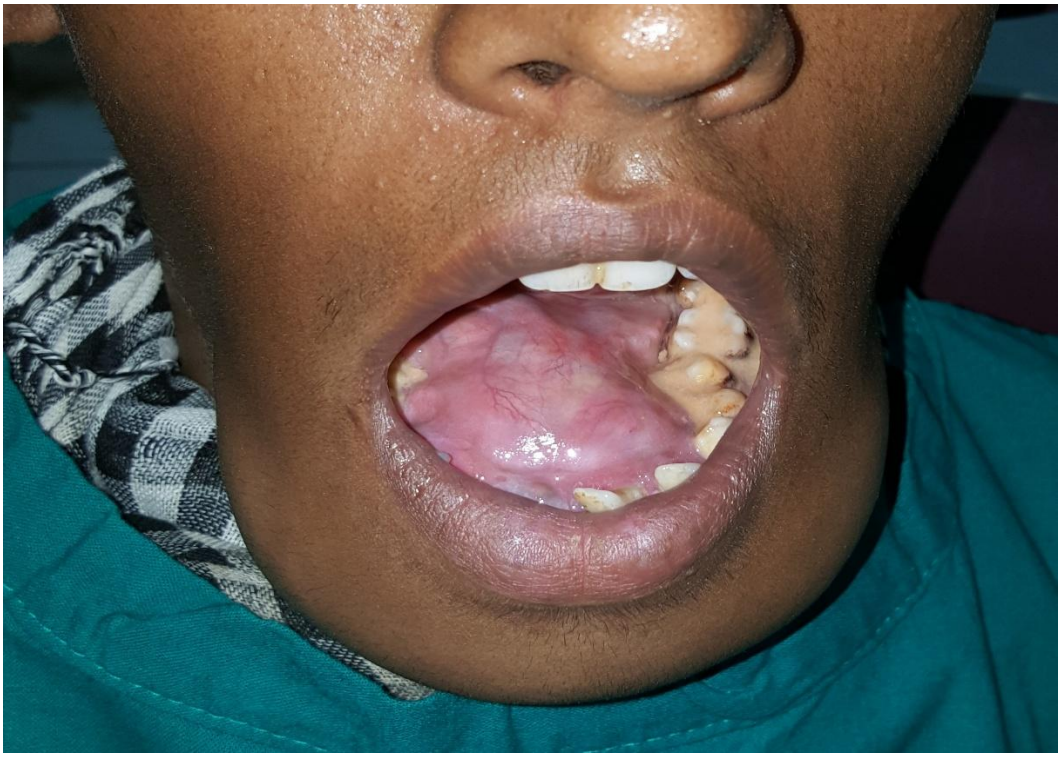

Fig. 2: Intra oral aspect of bony hard swelling involving the floor of the mouth from molar to molar region, overlying mucosa in normal.

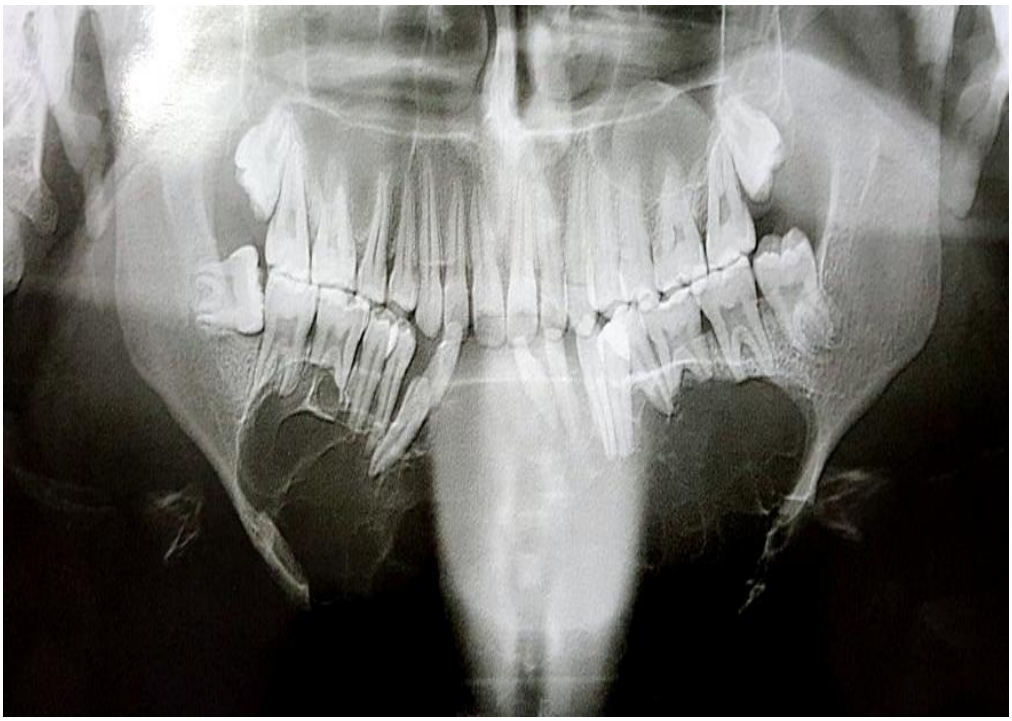

Fig. 3: Orthopantomogram showing multilocular cystic lesion involving almost all mandibular region from second molar to molar.

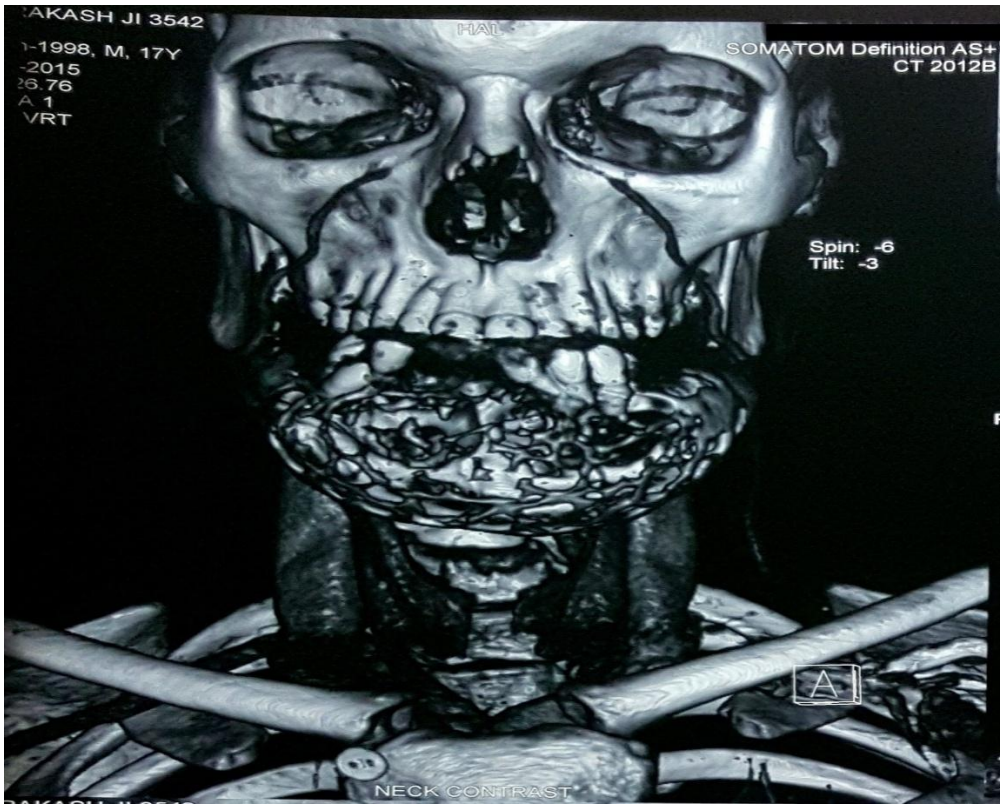

Fig. 4

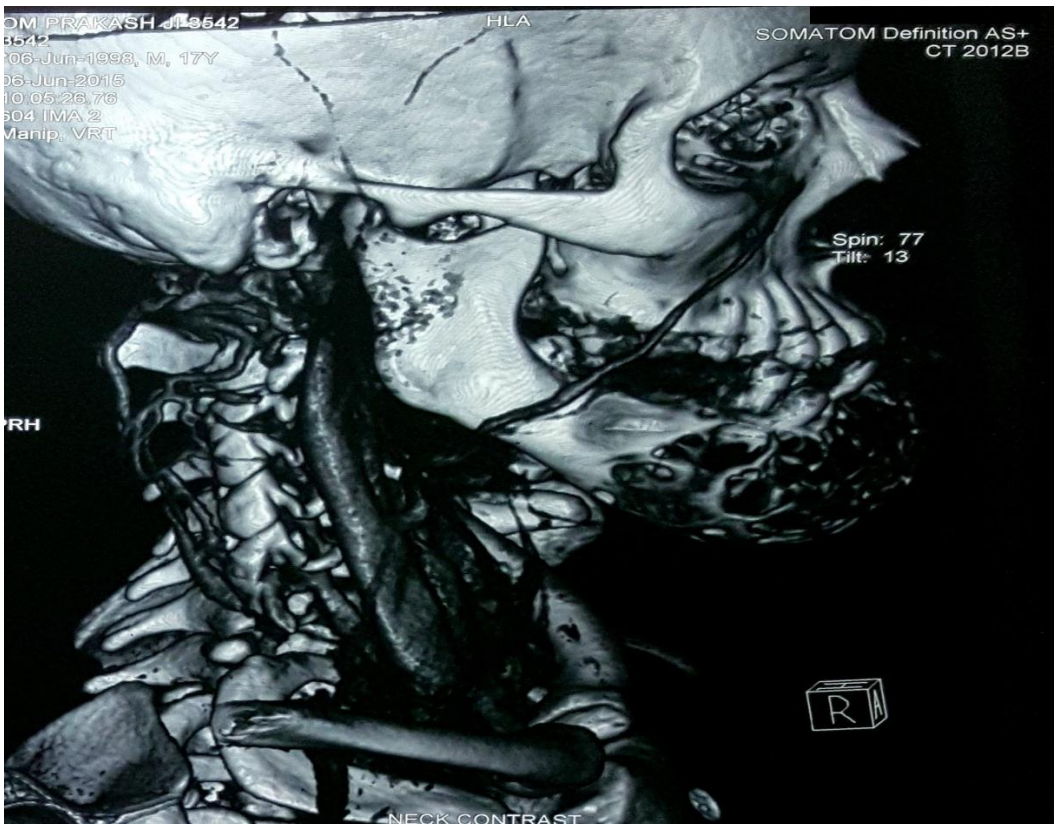

Fig. 5

Fig. 4 & 5: CT scan showing expansive multiloculated bony cystic lesion with multiple thick enhancing internal separation and calcification is arising from body of mandible causing significant thinning of overlying cortex. (Frontal & Side Profile)

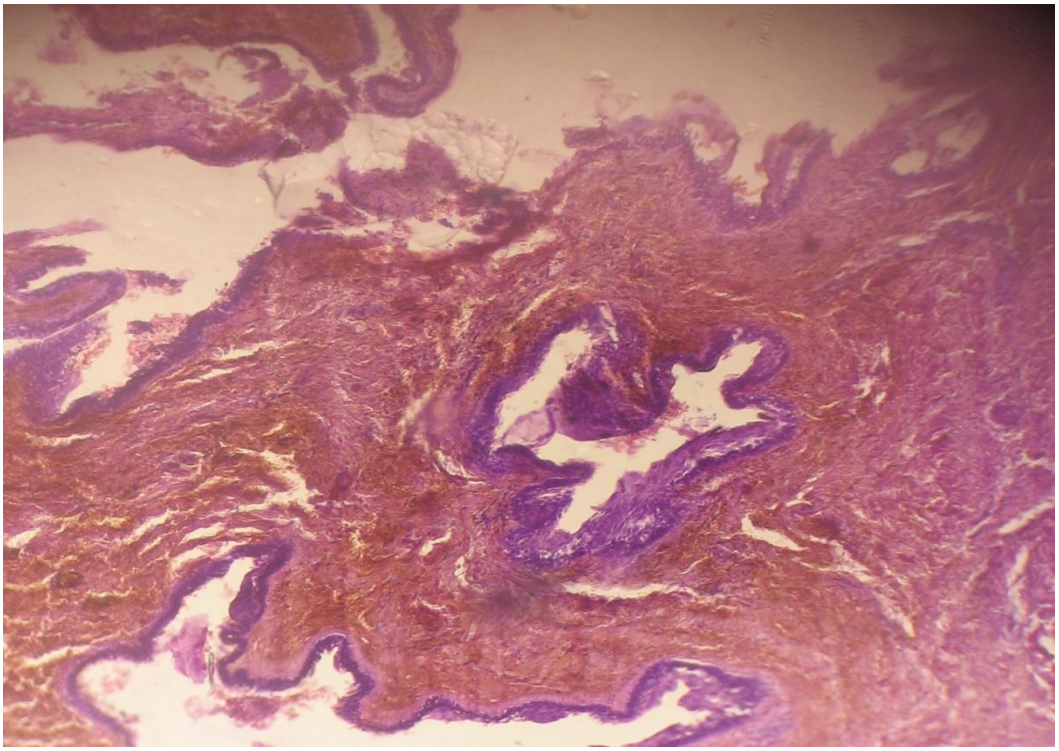

Fig. 6: Histopathological diagram showing islands of epithelium that resemble enamel organ in a fibrous connective tissue stroma attached to the basement membrane. 40_x

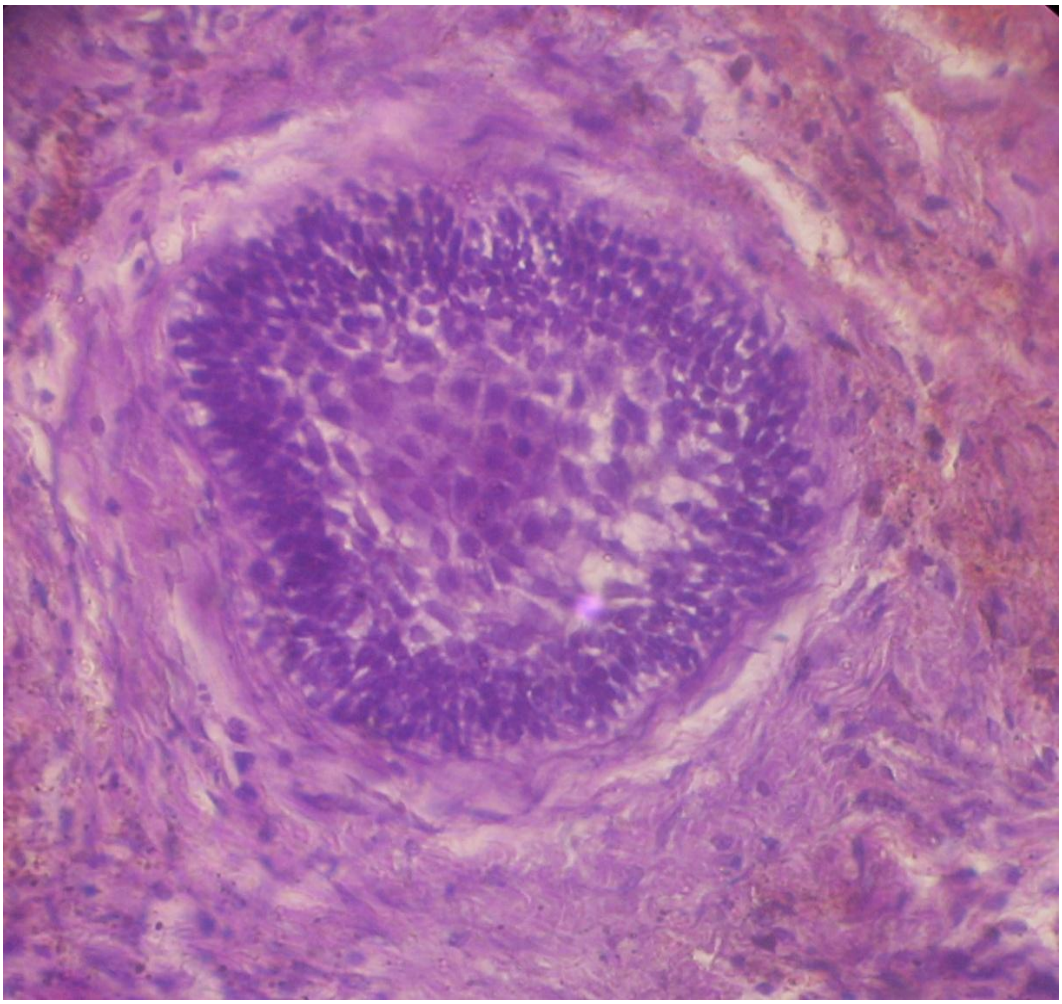

Fig. 7: Surrounding the islands are tall columnar cells exhibiting reversed polarity. 100x

DISCUSSION

Ameloblastoma may present diagnostic difficulties for the dental practitioner.[3] Ameloblastomas originate from epithelial remnants of dental embryogenesis, without the participation of the odontogenic ectomesenchyme (Martinez et al., 2008).

Although a wide variation in the range of ages can be observed, ameloblastoma primarily affects young adults between the fourth and fifth decades of life.[4]

Mean age of the occurrence of Ameloblastoma is between 35 to 45 years. Here we have presented a case of Follicular Ameloblastoma in 17 years old patient.

Ameloblastoma mainly occur in Mandible. 80% of Ameloblastomas occur in Mandible where rest 20% of Ameloblastomas occurs in Maxilla. In Mandible, 70% of ameloblastomas occur in Molar region; 20% of the lesion occurs in Premolar region and rest of the 10% may occur in symphysis or para-symphysis region.

When the tumor occurs in the maxilla, invasion of the tumor may compromise the maxillary sinus and the orbit. (Zwahlen et al., 2003).[4]

The most common histologic subtypes of ameloblastomas are follicular, plexiform, acanthomatous, granular and desmoplastic, just like in our case, we have presented a case of Follicular ameloblastoma. On Histologically Follicular Ameloblastoma shows epithelial island which looks like enamel organ. Tall columnar cells are present surrounding these islands and at the high power view island are showing toll columnar cells with the reverse polarity, which are Ameloblast cells. Hong et al recently showed that the histopathology of an ameloblastoma is significantly associated with recurrence.[7]

Treatment for the ameloblastoma is surgical removal. Surgical excision is the choice and look out for the free margin. There are chances for the reoccurrence. In our case choice for the treatment was surgical excision and followed by prosthetic rehabilitation. Patient is under observation since 1 year; there is no complaint of recurrence. In such cases all the patient requires long term follow-up to lookout for the recurrences.

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