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Ameloblastoma of Mandible (cystic variety): A Case Report

Dr. RupamBorgohain[1], Dr. Swagata Khanna[2], Dr. Ramen Talukdar[3], Dr. Jyotirmoy Phookan[4], Dr. MrinmoyMayur Choudhury[5]

[1](Asstt Prof.Department of ENT & Head & Neck Surgery, Gauhati Medical College & Hospital, India)
[2](Prof & Head,Department of ENT & Head & Neck Surgery, Gauhati Medical College & Hospital, India)
[3](Associate Prof.Department of Radiology, Gauhati Medical College & Hospital, India)
[4](Associate Prof.Department of ENT & Head & Neck Surgery, Gauhati Medical College & Hospital, India)
[5](Post Graduate Trainee,Department of ENT & Head & Neck Surgery, Gauhati Medical College & Hospital, India)

Abstract: *Ameloblastoma of the mandible is slow growing, locally aggressive and invasive, odontogenic benign tumour which is painless. Patients usually present late after the tumor achieves considerable size to cause facial disfigurement. This tumor comprises about 1% of tumors and cysts arising in the jaws. Radiograph and histopathology help in differentiating the variety of ameloblastoma. The management of ameloblastoma is complete excision along with reconstruction of the bony defect. The authors report a case of a cystic ameloblastoma in a 46 year-old man who was treated by left segmental hemimandibullectomy.*

Keywords: *Ameloblastoma, odontogenic, radiograph, histopathology, hemimandibullectomy etc.*

I. Introduction

Ameloblastomas are the second most common odontogenic tumour (odontoma is the most common) and account for up to one-third of such cases. Ameloblastomas arise from ameloblasts, which are part of the odontogenic epithelium, responsible for enamel production and eventual crown formation. Unicentric, nonfunctional, intermittent in growth, anatomically benign and clinically persistent. Ameloblastoma although rare, is the most common odontogenic tumor accounting for 1% of all tumors in head and neck region and around 11% of all odontogenic tumors[1]. They usually occur in middle age group i.e. 20-40years. The mandible is the most commonly affected area i.e. more than 80% of cases.In the mandible(80% of ameloblastomas), 70% are located in the area of molars or the ascending ramus, 20% in the premolar region, and 10% in the anterior region[1]. Here we are presenting a patient of ameloblastoma of the left mandible for discussion.

II. Case report

A 46 year old, male came to ENT OPD of GAUHATI MEDICAL COLLEGE with swelling over left side of face with facial asymmetry for four months. There was no associated pain. Clinical examination revealed a firm to hard mass of size 5cm x 5 cm, non-mobile and non-tender located at the left side of mandible near the angle. It was non-tender with smooth surface and diffuse margin. Intraoral examination revealed a firm mass extending from teeth 36, 37, 38. Occasional dull no radiating pain was associated with the swelling which was intermittent in nature.

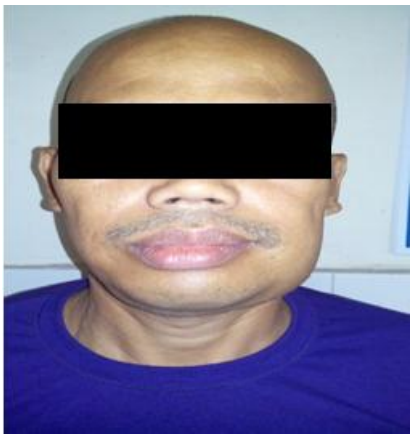


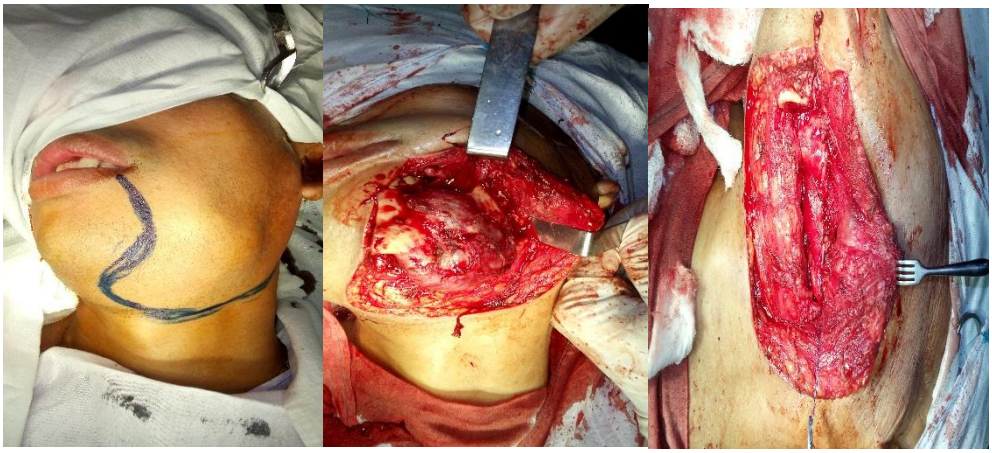
Fig 1: 46 year old male patient

Panoramic Radiograph revealed a large irregular osteolytic lesion involving the mandible on left side with soft tissue component, missing 37, 38 and erosion of and mal aligned 36 likely to be ameloblastoma. FNAC revealed hemorrhagic fluid with smears from centrifuged deposits shows cytological features suggestive of ameloblastoma.

CT SCAN of the faciomaxillary region revealed a well-defined, well corticated expansilemultiloculated lytic lesion with internal septation and enhancing soft tissue component showing soap bubble appearance. Thinning of lingual and buccal cortex noted in the body and angle of left mandible. There is erosion of major tooth adjacent to the lesion. There is invasion of the inferior alveolar nerve by the lesion.

Fig 2: CT scan of the faciomaxillary region

Patient was planned for surgery. Skin incision was made below the swelling margin sparing the lip and chin anteriorly and deepened to mandibular periosteum. Superior flap elevated exposing mandible and mandibular mass and normal mandible posteriorly. Lower gingival margins are separated. Left Second molar was removed. Mandible cut with giglis saw preserving the mandibular ramus. Surgical defect was repaired in layers of mucosal, muscular, platysma and skin.



(a) (b) (c)

Fig 3: Skin Incision (a),Intra-operative image (b) & (c) Intra-operative image

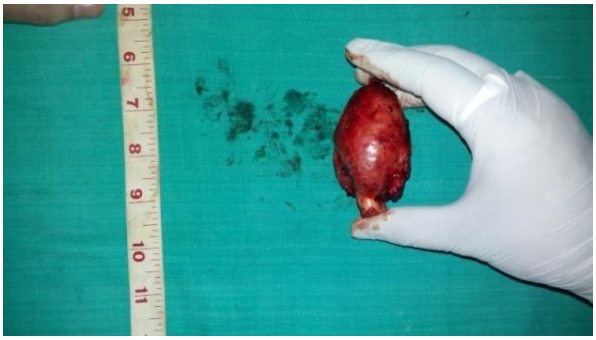


Fig 4: Resected specimen

Histopathology of the specimen revealed tumour mass composed of sheets of basaloid looking cells, arranged in sheets and anastomosing cords with numerous cystic spaces of variable sizes. Few of the cysts contain keratin and few contain necrotic material. The neoplastic cells are small with scanty eosinophilic cytoplasm and round to ovoid deeply basophilic pleomorphic nuclei with prominent nucleoli. Numerous mitotic figures also noted. Deeper muscle tissue show no tumour cell infiltration**.**

Features suggestive of Ameloblastoma of the mandible of cystic variety.

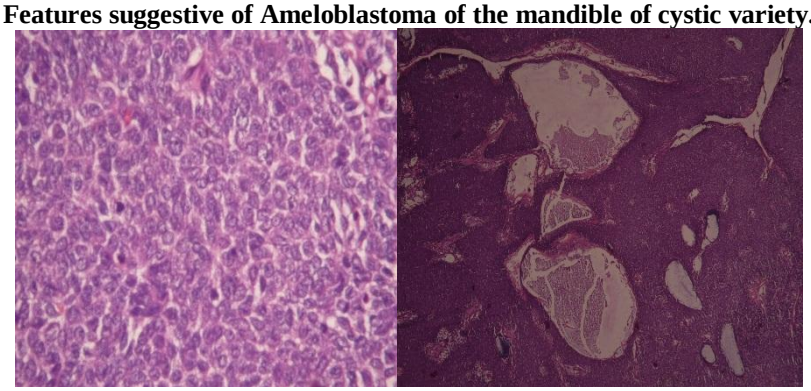


Fig 5: Histopathological slides of the specimen

Post-operative period was uneventful with regular follow up:

Fig 6: Post-operative image

III. Discussion

Ameloblastoma of the mandible is slow growing,odontogenic tumour which is locally invasive and painless. It is an aggressive neoplasm that arises from remnants of the dental lamina and dental organ(odontogenic epithelium)[2] Its importance lies in its potential to grow into enormous size with resulting bone deformity[3] They have high rate of recurrence. Recurrence rate of 34.7 and 22.6 percent were reported following conservative and radical treatment, respectively[4].Histologically they can be classified into Follicular, Plexiform, Acanthomatous, Basal cell, Desmoplastic, Unicystic, Cystic / follicular, Follicular / Desmoplastic, Follicular / Acanthomatous, Follicular / Acanthomatous/Cystic[1].Malignant transformation of ameloblastoma is very rare[5]. Radiographically follicular ameloblastoma shows multilocular/soap bubble appearance while plexiform ameloblastoma shows unilocular appearance. Treatment consists of surgical resection followed by surgical reconstruction. Radiation therapy may be considered,if complete resection is not possible or if positive resction margins are not amendable to resection[6]

IV. Conclusion

Histopathological examination of the specimen is useful to differentiate various type of ameloblastoma. Clinical examination and radiology and histopathology help in proper evaluation before surgery. Follow up of ameloblastomas should be indefinite as recurrences can develop beyond 20 years [7]

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