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CASE REPORT

Giant Ameloblastoma of Mandible: A Case Report

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ABSTRACT:
Ameloblastomas are rare, slowly growing and locally invasive tumors with high recurrence rate, if not treated they can grow to enormous size.Ameloblastoma is a benign locally invasive epithelial odontogenic tumor comprising 1% of all tumors and cysts arising in the jaws. It is commonly found in the third and fourth decade in the molar ramus region of the mandible. Among all types of ameloblastoma, multicystic ameloblastoma is believed to be locally aggressive lesion that has the tendency for recurrence. In this report we present a large multicystic ameloblastoma in the left body-ramus region of the mandible in a 45-year-old man. This large lesion was diagnosed with the help of 3DCT and was successfully managed by hemimandibulectomy.
Key Words: Ameloblastoma, Multicystic, Surgical management, Radical excision.

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INTRODUCTION:

Ameloblastoma is the most common benign odontogenic tumor of the jaws that constitutes about 1% of all cysts and tumors of the jaws. [1,2] Ameloblastomas or adamantinomas are rare tumors of jaw it constitutes 1–3% of all jaw tumors [1]. In 1885 Malassez introduced the term adamantinoma to denote the odontogenic tumors, Ivey and Churchill changed the name in 1930 to Ameloblastoma. It is more common in mandible, it presents as slow growing, painless swelling causing expansion and local destruction of cortical bone, they can grow to enormous size over the years without any malignant change. It is generally a painless, slow growing, locally aggressive tumor causing expansion of the cortical bone, perforation of the lingual or the buccal cortical plate and infiltration of the soft tissues. It has peak incidence in third and fourth decade of life but can be found in any age group with equal gender predilection (1:1). [3–7] The relative frequency of mandible to maxilla is reported to be varying from 80–20% to 99–1%. In the mandible majority of ameloblastomas are found in the molar ramus region. [3,5] In a conventional radiograph, ameloblastoma can present as either unilocular or multilocular corticated radiolucency; the bony septae results in a honey comb or soap bubble appearance, or tennis racket pattern. In some places, cortical plates are spared and expanded where as in other region they are destroyed; root resorption is a common finding. [8] Buccal and lingual cortical plate expansion is more common in ameloblastoma than in other tumors. [7] Conventional radiograph is sufficient for small mandibular lesions but maxillary lesions and extensive lesions require CT and MRI to establish the extent of the lesion. [7] The challenge in managing ameloblastoma is in achieving complete excision and reconstruction of the defect when the tumor is large. [8] Ameloblastoma is treated by enucleation, curettage or surgical excision depending on size and type of the lesion. The rate of recurrence ranges from 17.7% for

enbloc resection to 34.7% for conservative therapy. Wide resections with a safety margin of healthy bone to prevent local recurrence were preferred. [9]

CASE REPORT:

A 45-year-old man reported with a swelling on the left side of the face for 2 years and pain while chewing food for 3 months. The swelling was insidious in onset and gradually increased to the present size. There was no history of trauma or toothache or decrease in the size of the swelling or any discharge from the swelling. The patient was experiencing pain while chewing hard food. The patient also had altered sensation over the left cheek region. Patient was having no deleterious habit. It was of unknown etiology. On examination, there was a solitary ill-defined diffuse swelling over the left middle and lower third of the face (Figure 1) measuring about 12×8 cm extending superioinferiorly from the left pretragal region crossing the lower border of the mandible and mediolaterally 1 cm from the left corner of the mouth to the left lateral border of the mandible.Swelling was crossing the midline. The surface was smooth and the skin overlying the swelling was stretched and was of normal colour with no secondary changes to be found. It was non-tender and hard to the palpating fingers. An intraoral examination revealed an ill-defined solitary swelling in the left lower posterior buccal vestibule extending anterioposteriorly from 34 to the retromolar region and mediolaterally 1.5 cm from the buccal surface of the molars to 1 cm lingual to molars with smooth surface and mucosa overlying was stretched and similar to adjacent mucosal colour with no secondary changes to be found. It was non-tender and hard in consistency with buccal and lingual cortical plate expansion. There were clinically missing teeth (34 till 38). Considering the clinical findings, a tentative diagnosis of benign tumor of the left side of lower jaw was made. Ameloblastoma was thought as first in the list of differential diagnosis as it is the most commonly occurring tumor in the mandibular molar ramus region in this age group. Second. odontogenic myxoma was considered, which has similar site of occurrence. An OPG was taken for basic evaluation (Figure 2).

The patient was subjected to radiographic and routine hematological examination. The hematological findings were not significant. The axial CT of the jaw (Figures 3 and 4) revealed a very large well-defined radiolucent expansile lesion in the left body and ramus of the mandible with multilocular appearance causing expansion of the body and ramus. The screening chest radiograph did not show any evidence of metastasis.3DCT scan confirmed the extensions. (Figure 5 & 6) Differential diagnosis led to Odontogenic keratocyst, odontogenic myxoma, central giant cell granuloma and Brown's tumor of hyperparathyroidism. As the lesion was very extensive, a hemimandibulectomy (Figure 7) was performed under general anesthesia. The postoperative period was uneventful.

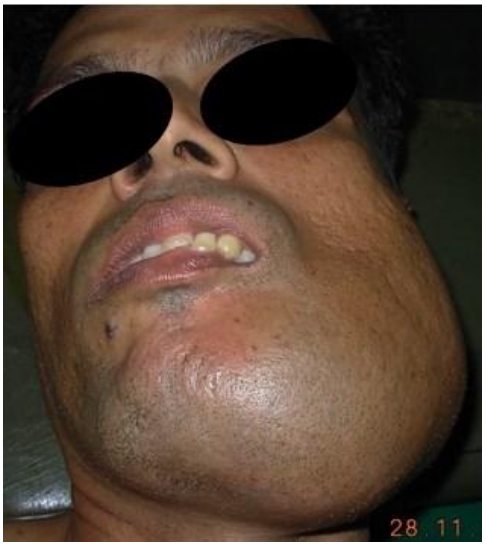

Figure 1 - Clinical Picture of Patient.

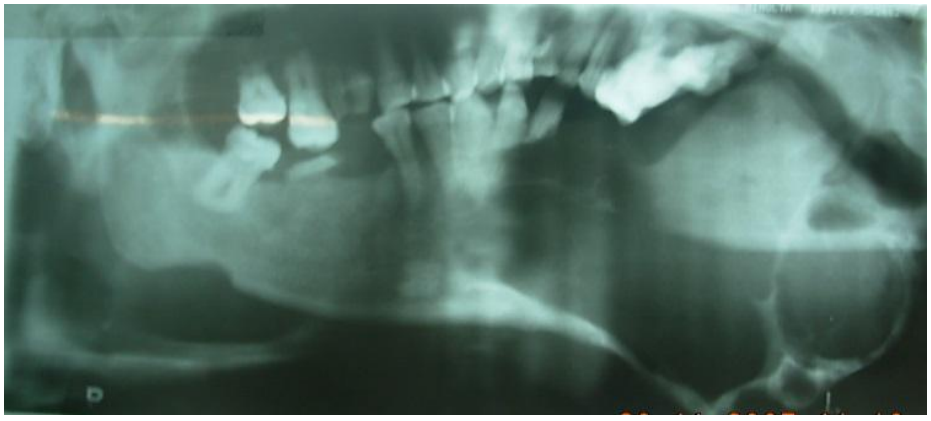

Figure 2 - OPG Picture of Patient.

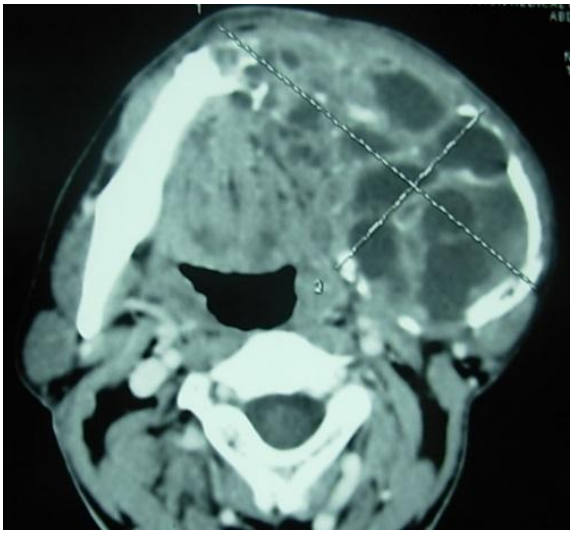

Figure 3 - Axial Section of CT Scan of Patient.

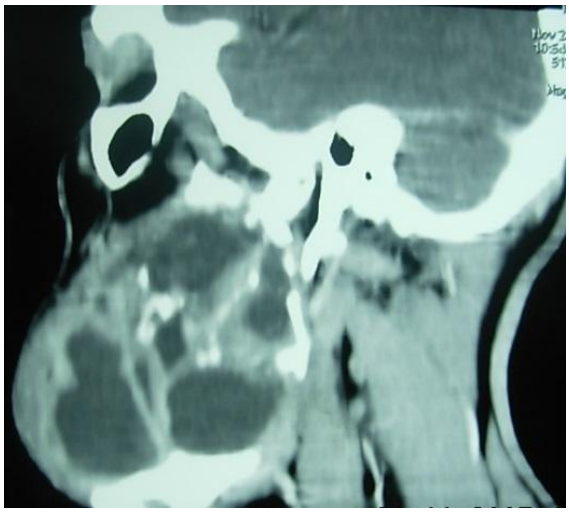

Figure 4 - Sagittal Section of CT Scan of Patient.

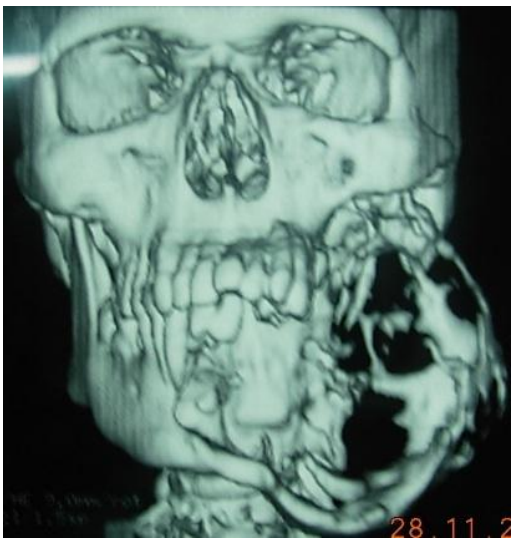

Figure 5 - 3DCT Scan of Patient - Anteroposterior View.

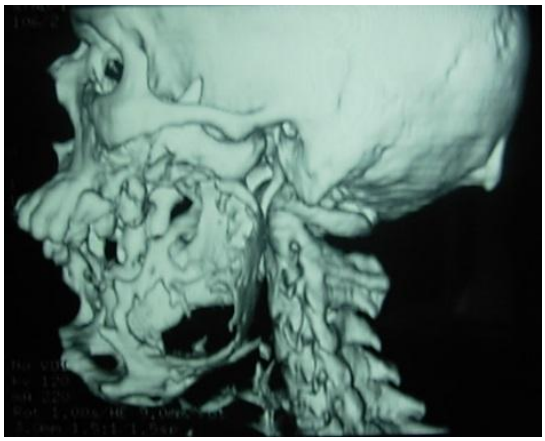

Figure 6 - 3D CT Scan of Patient - Mediolateral View.

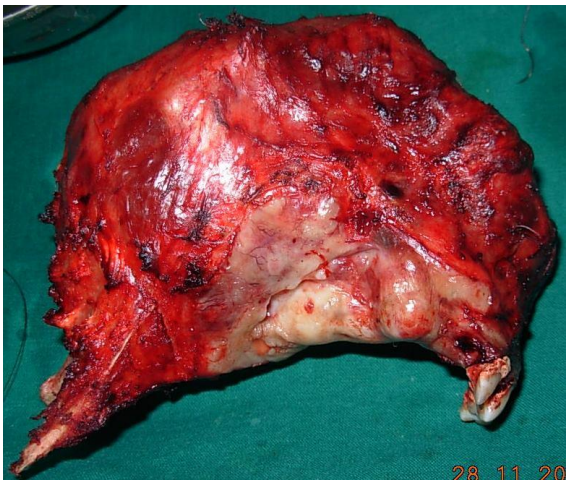

Figure 7 - Excised Lesion of Patient.

CONCLUSION:

Ameloblastoma is the most commonly occurring odontogenic tumor in the mandibular body ramus region in the middle age group, yet other differential diagnosis such as odontogenic keratocyst, odontogenic myxoma, central giant cell granuloma has to be ruled out with the help of advanced radiodiagnostic tools. The best treatment of ameloblastoma is aggressive enbloc resection with simultaneous reconstruction. It is no longer possible to perform a simple curettage or enucleation. Recidivism is higher after conservative treatment as radical. The risk of recurrence is highest in the first three years but recurrence may occur much later, after 15 to 30 years.Benignity of the giant ameloblastoma is uncertain, the treatment should be radical, long-term monitoring is essential.

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