

A CASE OF AMELOBLASTOMA TREATED WITH CONSERVATIVE APPROACH

¹*Dr. Arshad Khan, ²Dr. Anoop Kumar Dixit and ³Dr. Rifaquat Ali

^{1,2,3}Post Graduate Student, Career Post Graduate Dental College and Hospital, Lucknow.

Article Received on
10 Jan. 2019,

Revised on 31 Jan. 2019,
Accepted on 20 Feb. 2019

DOI: 10.20959/wjpr20193-14382

*Corresponding Author

Dr. Arshad Khan

Post Graduate Student,
Career Post Graduate Dental
College and Hospital,
Lucknow.

ABSTRACT

Ameloblastoma is an aggressive, benign odontogenic tumor of the jaw with varying clinical features and histologic patterns. The treatment options of en block and segmental resection reduce the chance of recurrence. Resection of the mandible is associated with many complication like loss of jaw bone integrity, deformity, dysfunction, cosmetic and psychological distress. For these reasons, young, growing patients find these treatment options are simply unacceptable. An alternative method for young growing patients is the conservative approach. A 16 year old male with clinicoradiological diagnose as ameloblastoma treated by-Enucleation and chemical cauterization of

the lesion with cornoy solutions followed by iodoform dressing routinely. Patient was followed up for 1.5 year. No recurrence occurred.

INTRODUCTION

Ameloblastoma is described as a benign, locally invasive, polymorphic neoplasm that consists of proliferating odontogenic epithelium lying in fibrous stroma.^[1] The age range of it's occurrence is usually between the first and 7th decades of life with a mean in the fourth decade.^[2] Clinically, Ameloblastoma can be classified into 4 groups unicystic, solid or multicystic, peripheral and malignant.^[3] The unicystic ameloblastoma usually appears as a "cystic" lesion with either an intraluminal or an intramural proliferation of the cystic lining.^[3]

Radiologically, it may resemble a well circumscribed slow growing radiolucency. Ameloblastoma has a high recurrence rate (upto 60-80%) if not adequately removed. In the Mandible, resection has been the principle treatment of Ameloblastoma as the chance of recurrence is extremely high, if it is treated inadequately.^[4,5] The resection of mandible including condyle and wide anterior region in growing young patient is associated with

number of complication such as loss of jaw bone support, deformity, dysfunction and psychological distress even after reconstruction.^[4,6]

CASE PRESENTATION

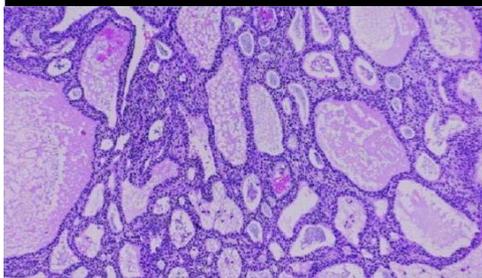
A 16 year old male (Fig1) patient came to our department with a chief complaint of swelling in left back region of the lower jaw since 2 years. Patient give history of swelling was small initially which enlarge gradually. Extraorally, his face was symmetrical. Intraoral examination revealed that no missing teeth, a swelling present on left side of molar area involving the vestibular region on the mandibular left side. On palpation the swelling was firm, non tender and predominately lingual. Eggshell cracking was present.

On radiological investigation (OPG) a unicystic a multilocular radiolucency was seen extending from the premolar region to the angle of mandible. There was resorption of involving tooth root (Fif 2).

After clinico-radiological confirmation, we planned surgical treatment for this lesion with the provisional diagnosis of Ameloblastoma. It is well known that Ameloblastoma is an aggressive lesion and the chance of recurrence is high so the treatment options were en-bloc resection or segmental resection. We chose to enucleate the lesion and do chemical cauterisation because the patient was a young male who was serious about his facial esthetics. The patient was followed up for a long time afterwards at regular intervals.

After complete hematological investigation, surgery was done under general anesthesia. Using an intraoral approach, through an incision extending from the premolar area to the ramus, the lesion was enucleated and then Cornoy's solution (6% ethanol, 3% chloroform, 1% acetic acid and 1 g ferric chloride) was applied to the cavity using a cotton pledget for 3 minutes(Fig 3). After that the cavity was closed with a betadine dressing partially protruding from an unsutured length. Two days afterwards an iodoform dressing was packed in place of the betadine dressing which was pulled out. Iodoform dressing was repeated at regular intervals. The excisional biopsy confirmed ameloblastoma and revealed its histological variant as Plexiform Ameloblastoma (Fig5).

The patient was followed for 1.5 years and an excellent result was achieved with no recurrence(Fig4). We achieved a symmetrical facial profile and satisfactory function. A good bone growth achieved as compared to the preoperative state.

**FIG 1- Preoperative****FIG 2- Preop OPG****FIG 3- Intraoperative****FIG 4- Post op OPG After 1 year****FIG 5- Histopathology**

DISCUSSION

The ameloblastoma is benign odontogenic tumor but are locally aggressive and can occasionally metastasize.^[7] Its most commonly occur in the mandible, particular on molar region in 4th decades of life. Recommended imaging techniques includes plain radiography such as Panorex radiographs reinforced by CT scan.^[8] Ameloblastomas are rare in young individual. A high chance of unicystic ameloblastoma occurred and recommended relatively conservative treatment in first instance.^[9,10]

As mostly resection of the mandible has been the principle treatment of ameloblastoma as the chance of recurrence is extremely high if it is treated by an inadequate procedure. The resection of mandible including condyle and wide anterior region in growing young patient is associated with number of complication such as loss of jaw bone support, deformity and psychological distress even after reconstruction.^[4,5,6]

Unicystic ameloblastoma which is less aggressive than solid or multicystic ameloblastoma, often can be treated with enucleation and peripheral ostectomy sometimes with physiochemical treatment (cryotherapy, electrocautery or tissue fixative).^[11] Recurrence rate of after conservative treatment of unicystic ameloblastoma however reported to be between 10 and 25%. The use of cornoy's solution for this specific purpose in relation to unicystic ameloblastoma was initially suggestive by Stoelinga and Bronkhorst in 1987. unicystic ameloblastoma is inherently less aggressive than its solid counterpart and should respond to a less aggressive treatment modality, although simple enucleation may not be appropriate. For this reason, treatments such as enucleation followed by curettage and liquid nitrogen cryospray or Carnoy's solution.

CONCLUSION

Ameloblastoma in young individual is less commonly involved. Treatment of ameloblastoma in young individual must be based on to reduce morbidity so in young growing patient a more conservative approach with close postoperative follow-up will significantly reduces the morbidity.

ACKNOWLEDGMENT: We thanks to Dr. Iqbal Ali for supervision and giving proper guidance to achieve successful completion of this case.

REFERENCES

1. Gardner DG, Heikinheimo K, Shear M, Philipsen HP, Coleman H. Ameloblastomas. In: Barnes L, Eveson JW, Reichart P, Sidransky D, edit-ors. *World Health Organization classification of tumors. Pathology and genetics: head and neck tumours*. Lyon: IARC Press, 2005; 296–300.2.
2. Kameyama Y, Takehana S, Mizohata M, Nonobe K, Hara M, Kawai T, *et al.* A clinicopathological study of ameloblastomas. *Int J Oral Maxillofac Surg*, 1987; 16: 706-12.

3. Robinson L, Martinez MG. Unicystic ameloblastoma: A prognostically distinct entity. *Cancer*, 1977; 40: 2278-82.
4. Kawamura M. A proposal for the treatment of ameloblastoma. *Jpn. J. Oral Maxillofac. Surg*, 1983; 29: 765.
5. Kawamura M, Kobayashi I, Inoue N. Dredging method-a new conservative treatment approach for cystic lesions and tumors of the jaw. *Hokkaido J. Dent. Sci.*, 1988; 9: 104-106.
6. Seldin HM. Conservative surgical treatment of ameloblastoma of the jaws. *J. Oral Surg*, 1944; 2: 333-349.
7. Henderson JM, Sonnet JR, Schlesinger C, Ord RA. Pulmonary metastasis of ameloblastoma: case report and review of the literature. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, 1999; 88: 170–176.
8. Sehdev MK, Huvos AG, Strong EW, Gerold FP, Willis GW. Proceedings: Ameloblastoma of maxilla and mandible. *Cancer*, 1974; 33: 324–333.
9. Al-Khateeb T, Ababneh KT. Ameloblastoma in young Jordanians: a review of the clinicopathologic features and treatment of 10 cases. *J Oral Maxillofac Surg*, 2003; 61: 13–18.
10. Ord RA, Blanchaert Jr RH, Nikitakis NG, Sauk JJ. Ameloblastoma in children. *J Oral Maxillofac Surg*, 2002; 60: 762– 770 discussion, 770-1.
11. M. A. Pogrel and D. M. Montes, “Is there a role for enucleation in the management of ameloblastoma?” *International Journal of Oral and Maxillofacial Surgery*, 2009; 38(8): 807–812.