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Conservative Management of Ameloblastoma in Adolscents: Two Case Reports

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Abstract | **Case Report**

Ameloblastoma is a common form of aggressive benign tumor of the jaws, but it is rare in childhood. The treatment of ameloblastoma is controversial. Surgical treatment of ameloblastoma in children follows the principles of the clinical and pathological behaviour of the tumor in this article we presented two cases of ameloblastoma reported in young adults below 19 years of age and we managed the cases with conservative approach with good prognosis.
Keywords: Ameloblastoma, benign tumor, childhood, prognosis.

INTRODUCTION

Ameloblastoma is the most common clinically significant odontogenic tumor of the jaws. Ameloblastomas are tumors of odontogenic epithelial in origin. They are slow-growing, locally invasive tumors that run a benign course in most cases. The tumor shows an approximately equal prevalence in the third to fourth decades of life with no significant gender predilection, and high recurrence rate. Mostly found in mandible. But ameloblastoma in children under 19 years is rare. Conservative treatments are acceptable as the inital treatment of ameloblastoma in children and recurrence rate was quite low. We present a report of two cases of ameloblastoma treated conservatively with follow up.

CASE 1

A 19 yr old male patient reported to our department with a history of swelling over the right lower back region of the face since 2 months. No history of associated pain or parasthesia was elicited. On intra oral examination there is obliteration of buccal vestibule extending from first premolar region to the external oblique ridge. Extra orally swelling extended anteriorly from corner of mouth to tragus of ear posteriorly and superiorly from line joining the corner of mouth to tragus and inferiorly to the inferior border of the mandible. Swelling was firm in consistency and on palpation cortical expansion on buccal and lingual aspects was felt. OPG revealed radiolucency extending from second pre molar region to anterior border of ramus on right side of mandible along with root resorption in relation to lower molars. Incisional biopsy was done, and on histopathological examination, it was reported as unicystic ameloblastoma. Case was planned for conservative method of treatment keeping in view the age of the patient and esthetics. Under general anaesthesia, enucleation was done along with application of carnoys solution. The patient was reviewed post operatively for a period upto 1 yr and showed no recurrence.

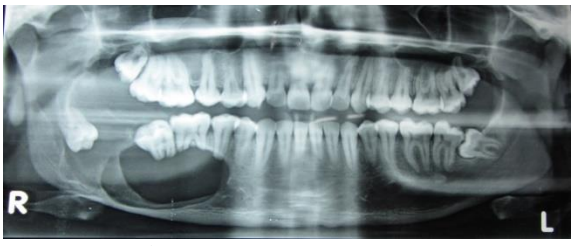

Fig-1: Pre OP OPG: Case 1

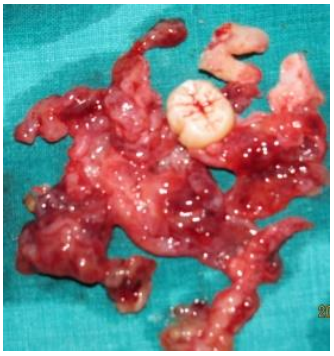

Fig-2: Intra OP: Case 1

CASE 2

A 15 yr old male patient reported to our department with a chief complaint of swelling on the right lower back tooth region since one month. No history of pain or parasthesia associated with the swelling. On extra oral examination swelling extended from corner of mouth anteriorly to tragus of the ear posteriorly, superiorly from lower border of zygomatic arch to inferior border of mandible inferiorly. Swelling is firm in consistency. Intra orally buccal cortical and lingual cortical plates are expanded. OPG revealed a typical soap bubble appearance extending from first pre molar on right side to third molar which is unerrupted, roots of teeth from premolars to second molar are resorbed. Incisional biopsy was taken and it was reported as Unicystic ameloblastoma. Enucleation was done and reviewed for a period of one year post operatively.

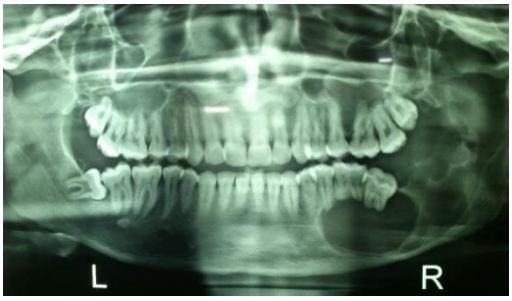

Fig-3: Pre op OPG Case 2

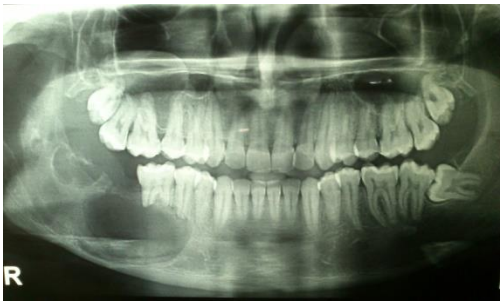

Fig-3: Post Op OPG Case 2

DISCUSSION

Ameloblastoma is the most common odontogenic neoplasm affecting the jaws, yet it accounts for only 1% of all tumors of the maxilla and mandible [2-4] and 11% of all odontogenic tumors. It is an aggressive benign tumor of epithelial origin that may arise from the enamel organ, remnants of dental lamina, the lining of an odontogenic (dentigerous) cyst, or possibly from the basal epithelial cells of the oral mucosa.It often presents as a slow-growing, painless, swelling causing expansion of the cortical bone, perforation of the lingual and/or buccal plates, and infiltration of soft tissue. There is often delay in the diagnosis because of its slow-growing nature. Falkson first described ameloblastoma in 1879. It was officially named ameloblastoma by Churchill in 1929.Ameloblastomas are currently divided into four types: multicystic or solid type, extraosseous, peripheral type, desmoplastic type and unicystic type. Pogrel [11] has found that solid and multicystic ameloblastomas have a high recurrence rate (60–80%) with simple conservative treatment and require more aggressive treatment. It may be classified into five histological types as follows: plexiform, follicular, acanthomatous, basal cell and granular types [9] Radiographically, it may present as a unilocular radiolucent area with a

well-defi ned margin or with a multilocular aspect, often in the shape of soap bubbles or a honeycomb [7] They rarely metastasize but have a high tendency to recur because of the presence of satellite tumour cells. On reviewing the current available literature, 156 (49.2%) of 310 patients were treated with conservative surgery, and 154 (48.6%) were treated with radical surgery, 23(76.7%) patients were treated with conservative surgery, and 7(23.3%) patients underwent radical surgery; these choices were based on the premise that the conservative approach can better maintain the continuity of the mandible, protect the teeth in patients with mixed dentition, and ensure normal facial development [1]. The decision to do initial radical, extensive surgery or conservative procedures treatment in children always poses a dilemma [12].

Overall health, tumor size, location, duration, psychological impact, control of possible recurrence and possibility of periodic follow-up examinations should all be considered when formulating the surgical treatment [6]. Unicystic ameloblastoma is treated conservatively with decompression, enucleation and peripheral ostectomy as well with a periodic follow up. Periodically our cases were planned to manage via conservative approach keeping in view the deformity and dysfunction of the jaw obtained if radical resection is done and also the physical and physcological status of the children and adolscents will be affected if radical surgery is performed. So, we preffered for conservative treatment options as intial treatment measures. Many reports reveal the recurrence time is between 1 and 15 years, and 2–5 years is the most common [13,14]. For the most accurate recurrence rate findings, all cases should be routinely follow-up a long time because of the insidious biological behavior of ameloblastoma [15] a more aggressive surgical approach may be considered when the condition recurs more than twice or according to the patient's wishes [8].

Conclusion

Conservative treatment is appropriate as an initial approach to ameloblastoma in children and adolescents provided there is a good regular follow-up. If recurrence occurs, radical surgery can be performed at later date in order to reduce postoperative deformity maintain appearance and function.

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