

Acanthomatous ameloblastoma – A case report

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Abstract

Ameloblastoma is a common pathological disease of maxillofacial region. It is frequently seen in Asian continents, but huge variants are seen in African countries. Hereby we are presenting a case report of acanthomatous ameloblastoma operated for excision, curettage and chemical cauterization under general anesthesia.

Keywords: Ameloblastoma, Oral Pathology.

Introduction

Ameloblastoma is a true epithelial odontogenic tumor usually unicentric, nonfunctional, intermittent in growth, anatomically benign and clinically persistent.¹ It usually consists of proliferating odontogenic epithelium usually with a follicular or plexiform pattern lying in a fibrous stroma.² Cussack in 1827 was the first to recognize lesion of odontogenic origin.³ Malassez in 1855 first defined as adamantinoma.⁴ Ameloblastoma has predominancy to affect young people.⁵ Clinical presentation and characteristics regarding size, age, and sex distributions differs in the published literature.⁶⁻⁸ Sex predilection also differs as some author suggests it is higher in men and some suggest both these sexes are equally affected.⁹⁻¹¹ There are different radiologic and histologic patterns of ameloblastoma. Radiologically it can be unilocular or multilocular or multilobular.¹² Histologically it is of four types' unicystic, solid multicystic, extrasosseous peripheral and desmoplastic.² Treatment varies according to histological variant.

Case Report

A 36 year old male reported with a swelling on right side of lower jaw since 2 months and pain while chewing food since 3 weeks. Swelling was insidious in size and gradually increased to the present size. There was no history of trauma or tooth ache or decrease in size of swelling or any discharge from the swelling however patient was experiencing pain while chewing hot food. On clinical examination there was a solitary ill-defined diffused mild swelling over the right mandible on the lower 3rd of the face. (Fig. 1) measuring about 6 x3 cm extending Medio laterally 2 cm lateral to the midline on the right side till the angle of the mandible and superiorinferiorly from the corner of the mouth to lower border of the mandible. The surface was smooth and the skin overlying the swelling was not much stretched or distended and was of normal colour and texture of skin with no secondary changes to be found. It was tender and hard to the palpating fingers. An intraoral examination

revealed an ill-defined, solitary swelling in the right lower posterior buccal vestibule extending anteroposteriorly from canine to the third molar region and mediolaterally 1.5 cm from the buccal surface of molars towards the interdental gingiva of the involved teeth (Fig. 2). The mucosa overlying was stretched but was similar to the adjacent mucosal colour. It was tender and hard in consistency with buccal cortical plate expansion. Considering the clinical findings, we came to a tentative diagnosis of benign tumor of right side lower jaw. Ameloblastoma was the primary differential diagnosis. Incisional biopsy was performed subjected to histopathological examination. Orthopantomogram elicited a well-defined radiolucency with scalloped border involving the periapical region from the right lower central incisor to the first molar. Root resorption was present with the premolars and first molars. Lower border of the mandible was intact with 3mm solid bone against the radiolucency. (Fig. 3) Histopathological examination showed multiple strands and islands of odontogenic epithelium with peripheral hyper chromatic palisaded cuboidal cells and central stellate cells. Focal areas of squamous metaplasia and associated stroma has dense collagen fibers with multiple island of odontogenic epithelium suggestive of ameloblastoma of acanthomatous type. Treatment implicated for the management of lesion included excision, curettage and chemical cauterization with Carnoy's Solution leaving the lower border intact. Routine hematological investigations, chest radiograph, Electrocardiogram and pre anesthetic checkup was performed before taking the patient under general anesthesia. Extraction of the involved tooth was done, a trapezoidal flap with bilateral relieving limb was given, and lesion was exposed. Complete excision of the lesion was done with thorough curettage and smoothing of borders with round bur with copious betadine irrigation. (Fig. 4) Carnoy's solution was used for chemical cauterization. Lingual perforation was present on the cortex of 2nd premolar region. A 12 hole reconstruction plate fixed 1cm above

the lower border of mandible leaving 5mm from the apices of roots as a safe side to prevent fracture of mandible from occlusal forces. (Fig. 5) Support for fixation of reconstruction plate was taken bilaterally from buccal cortex. Medicated gauze pack was kept in the defect and water tight closure was done. Medicated gauze pack was removed after 48 hours. Patient was kept under I.V drugs and discharged after 3 days. (Fig. 6)



Fig. 1: Extra Oral Photograph of the Patient



Fig. 2: Intra Oral Photograph of the Patient



Fig. 3: Orthopantomogram



Fig. 4: Excised Lesion



Fig. 5: Reconstruction plate Fixation



Fig. 6: Post-Operative Medicated Gauze

Discussion

The recurrence rate of unicystic and solid multicystic ameloblastomas ranges widely and depends on histological subtype¹³ usually small unicystic lesions are managed by enucleation as they are less likely to recur. But, in background the lesions other than unicystic or giant unicystic lesions had higher chance of recurrence. So the preferable option comes out as jaw resection. This approach has become more common due to wider options of microvascular grafts which are reliable to repair the defect. It is still a dilemmatic question for the operating surgeons about the merits and demerits of ameloblastomas to hand for aggressive approach. no doubt the published literature elicits that in the decades of 1940's to 1970's as per the advances in maxillofacial surgical field, enucleation was the preferable option compared to resection and reconstruction in ameloblastoma cases.¹⁴⁻²¹ Huge blow was given by Stoelting to the literature when he proved the reduction in recurrence of keratocyst from 60 percent to less than 10 percent by using carnoy's solution which

was very much beneficial to treat ameloblastoma's by chemical cauterization.²²⁻²³ Some authors have reported that the multilocular appearance is the most common radiological finding.²⁴ But, some suggest follicular pattern is the dominant histological type.²⁵⁻²⁶

Conclusion

Epidemiological variations are a pointer to variations in the experience of different groups, which may be better explained in terms of differences, awareness of condition and availability of facilities and resource personal for early diagnosis and treatment. Every case of ameloblastoma must be planned properly to increase the quality of life of patients.

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