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Acanthomatous Ameloblastoma Mimicking Peripheral Ossifying Fibroma: A Case Report

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Abstract: *Ameloblastoma is reported to constitute about 1-3% of tumors and cysts of the jaws. The tumor is by far more common in mandible than in maxilla and shows predilection for various parts of the mandible in different racial groups. The relative frequency of the tumor in mandible compared to maxilla is reported as varying from 80–20% to 99–1%. . When extensive squamous metaplasia, often associated with keratin formation occurs in central portions of the epithelial islands of follicular ameloblastoma, the term "acanthomatous" is applied . This case of acanthomatous ameloblastoma in a 36 -year-old male affecting the buccal alveolar mucosa of the mandibular, 32–34 region which was clinically diagnosed as peripheral ossifying fibroma, definitive histopathological report came as acanthomatous ameloblastoma.*

Keywords: *Ameloblastoma, , Acanthomatous ameloblatoma , Cyst of jaw , Odontogenic tumor, Peripheral ossifying fibroma.*

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I. Introduction

Prevalence of odontogenic tumor is 0.8% of all oral and maxillofacial pathology with Ameloblastoma accounting for 30% of these. [5] It is described for the first time by Broca (1868) as adamtinoma and then recoined by Churchill (1934)[11]. In 1993 Gardner and Baker described that acanthomatous epulides were a type of ameloblastoma that developed from the gingival epithelium (peripheral) or from alveolar bone (intraosseous)[12]. Acanthomatous ameloblastoma is considered as locally aggressive benign tumor of the canine region of the jaw, characterized by irregular verrucous masses adjacent to the tooth [6]. It has an aggressive local behavior and often invades periodontal apparatus, despite that it doesn't metastasize to other organs. The most curative treatment of choice for acanthomatous ameloblastoma is surgical excision. However, surgery can be declined owing to health problems or due to cosmetic defects. Radiation therapy has also been suggested as treatment for these tumor types. Intralesional chemotherapy is another option for treating acanthomatous ameloblastoma[13]. Here, we are reporting a case of peripheral ameloblastoma in a 36 year old male, clinically mimicking as peripheral ossifying fibroma.

II. Case Report

A 36/M patient reported to the Department of Oral and maxillofacial surgery, Government Dental College, Trivandrum, Kerala, India, with a chief complaint of swelling on the left lower anterior front gums region of 11-year duration. There was history of retained 73 which was extracted 5 year back after that the pateint noticed increase in size of swelling. Intraoral examination showed localised bony hard swelling , ovoid in shape, non tender, round, firm, and sessile growth with smooth surface, extending from 32 to 34 regions bucally and measuring (2 × 1) cm in diameter. The overlying mucosa appears stretched and had incresed vascularity (Figure 1). The involved teeth were vital. In Panoramic view, there was ill defined lesion which was having combined radioopaque and radiolucent areas extending from 32 to 34 and associated impacted canine. Occlusal view showed combination of radiolucency and radiopacity from region of 32 to coronal aspect of impacted canine . Oral hygiene status was good. Clinical diagnosis was made as peripheral ossifying fibroma . The lesion has been excised with marginal mandibular resection under general anaesthesia. The excised tissue sent for histopathological examination and the report came as acanthmatous ameloblastoma.

III. Discussion

Current opinion regarding treatment of ameloblastoma is essentially based on case reports, anecdotal evidence, retrospective reviews and histological evidence. There are no large scale studies with long-term follow-up of treatment results. The benign nature of these lesions often lead the surgeons to perform simpler extirpative procedures to avoid the potential morbidity associated with large resections.

This approach is still commonly practiced, despite reported recurrence rates of 55% to 90% for solid multicystic lesions treated by enucleation or curettage and even occasional metastases.[7,8,9] Sammartino et al recently proposed a new treatment algorithm to assist surgeons to develop a 'rational' diagnostic protocol and establish effective conservative surgical management in patients with mandibular ameloblastomas based on a ten year experience in their institution. According to the authors small ameloblastomas were treated by wide resection which includes at least 1cm of normal bone at the tumour margin. Large lesions without perforation of the cortex were treated conservatively (curettage), while those with cortical perforation were treated by resection with overlying soft tissues.[10] Accordingly, close follow-up was deemed necessary in cases treated conservatively in order to identify subsequent recurrences early and treat them more aggressively. The Sammartino et al treated 15 cases of ameloblastoma,including 10 solid multicystic ameloblastoma and 5 unicystic ameloblastoma. Of the 15 cases,

7 (46.7%)recurred after the first operation, all but one of which was within 5 years of surgery. The peak period ofrecurrence was 3 years. Of the 7 cases that recurred, 6 of them were solid multicystic type. Despite the obvious high recurrence rate in their study, the authors recommended that large ameloblastoma with nocortical perforation be treated by curettage with 0.5–1 cm of clinically uninvolved surrounding bone.[10]The rationale behind treatment of small ameloblastoma with resection and large ones (no bone perforation) with less than radical approach and to wait for recurrence before radical treatment is instituted may not be clinically justifiable, in view of the aggressive nature and overwhelming evidence regarding high recurrence rate of ameloblastoma if treated conservatively. One reason given by Sammartino et al for conservative treatment of large ameloblastoma was 'low morbidity'. According to them, radical treatment is associated with serious cosmetic, functional and reconstructive problems.

Despite the 'radical' nature of a surgical resection, it may actually involve less morbidity, than with extensive hard and soft tissue resection and extensive morbidity that may be warranted in case of recurrence following inadequate primary treatment.[8] In fact, with modern day reconstructive options, the need for reconstruction after surgical resection should not be a sole reason for treating ameloblastomas with a less than radical approach.

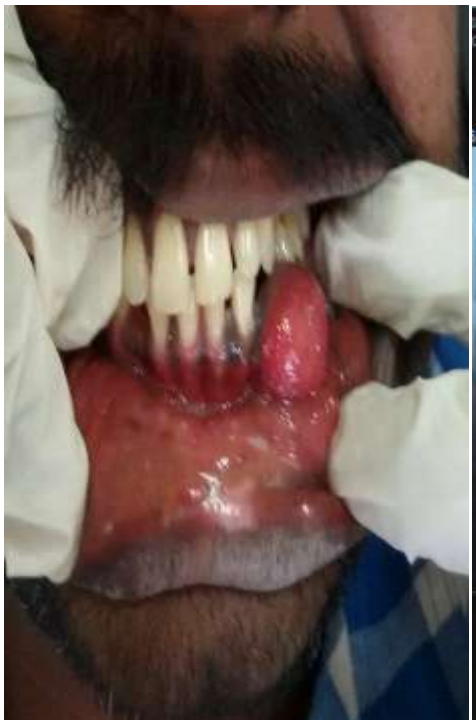

Figure-1 Pre-Op

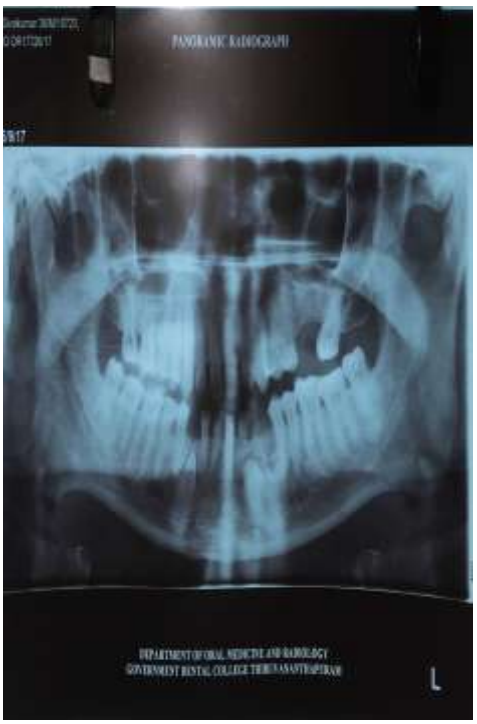

Figure -2 Panoramic View

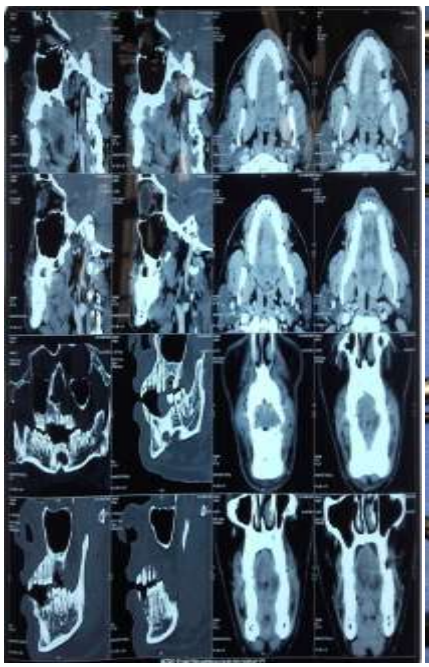

Figure 3: Ct Scan After Incisional Biopsy

Figure 4: Marginal Resection

IV. Conclusion

Based on the review of literature and the characteristics of the present case, it is concluded that, despite the low frequency of acanthomatous ameloblastoma, it is essential that dental practitioners should be able to recognize the features of these lesions so as to be able to distinguish them from lesions of odontogenic origin and thus enable safe and proper treatment planning. acanthomatous amelobalstoma must be kept in mind with the differential diagnosis of swellings present at canine premolar region, because clinical features may be difficult to detect because patients may be asymptomatic, but most exhibit ill defined swelling. Routinue radiographs like IOPAR, Occlusal, panoramic view fail to differentiate such lesions. So other radiological measures like CT scan are needed to find out extension of lesion. Histopathology is necessary to confirm the diagnosis. The optimal treatment modality is complete surgical excision of the lesion which results in good prognosis and rare recurrence.

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