SURGICAL MANAGEMENT OF PLEXIFORM AMELOBLASTOMA PRESENTING AS EXOPHYTIC GROWTH – A RARE ENTITY

K Sankar[1], Jaipal Narinder[2]

1 Professor and Head, Department of Oral and Maxillofacial Surgery, Mahatma Gandhi Postgraduate Institute of Dental Sciences, Pondicherry University
2 Postgraduate Resident, Department of Oral and Maxillofacial Surgery, Mahatma Gandhi Postgraduate Institute of Dental Sciences, Pondicherry University

CORRESPONDING AUTHOR: jaipal266@gmail.com

ABSTRACT

Ameloblastoma is locally aggressive neoplasm of odontogenic origin comprising about 1% among tumours and cysts that usually occurs in the vicinity of the mandibular molars or ramus of the mandible. Predominantly occurring in third to fifth decade, with no gender propensity. Inadequate treatment may lead to recurrence in certain cases. Even though benign in growth, they are locally aggressive and can occasionally metastasize. Of them, a unique exophytic presentation of plexiform ameloblastoma in a 22-year-old male patient is documented as follows.

KEYWORDS: Plexiform ameloblastoma, exophytic mass, odontogenic tumour, surgical management.
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INTRODUCTION

Ameloblastoma is a true neoplasm, histologically arising from remnants of the dental lamina, dental organ. They represent about 9% among odontogenic tumours and only 1% among oral ectodermal tumours and [1]. Common site of ameloblastoma is in the molar body and ramus of the mandible (70%) and occasionally associated with unerupted third molars [2]. Ameloblastoma occurs over a broad age range including children. The average age at diagnosis consistently reported in the age range of 33 to 39, and most cases cluster between 20-60 years [3,4]. They are predominantly locally aggressive but occasionally metastasize. It presents as unilocular or multilocular radiolucency with a honeycomb or soap bubble appearance. Six histological subtypes of ameloblastoma comprises follicular, plexiform, acanthomatous, granular, basal cell and desmoplastic type [5]. Among these types, the plexiform-unicystic variant shows less aggressive nature with lower recurrence rate. We are documenting a case of plexiform ameloblastoma with the clinical presentation as an exophytic growth.

CASE DISCUSSION

A male patient of 22 years of age came to our institute with swelling in the gums of lower right back teeth for over two and half months. The apparently asymptomatic patient noticed mobility of right lower back teeth one day, following which the swelling developed. It was smaller in size on onset, gradually increased attaining its present size and was not associated with pain, numbness and paraesthesia. No history of trauma and the medical history was unremarkable.

Extraoral examination revealed a single diffuse swelling of size approximately 3 ×4cm was present in the right lower third of face with no surface changes. Intraorally, a single diffuse swelling in buccal aspect, extending anteriorly from right first premolar till second molar, superiorly involving the marginal gingiva and inferiorly obliterating the buccal vestibule with surface showing a reddish proliferative exophytic growth (Fig. 1) Palpation revealed hard swelling was which was not tender , non-fluctuant, not reducible or compressible and no evident pulsation. Ther e was presence of buccal and lingual cortical expansion. Grade III mobility of teeth 45,46 and 47. Two right submandibular lymph nodes were enlarged, which was firm, non-tender and mobile.

On radiographic examination, mandibular right lateral occlusal view revealed unilocular radiolucency extending anteroposteriorly from distal aspect of 45 till distal aspect of 47, with bicortical expansion, extensive on buccal aspect. Panoramic radiography revealed well defined unilocular radiolucency with scalloped border extending from mesial of 44 to distal of 47 and displacing inferior alveolar nerve canal downwards. Evidence of severe root resorption in the apical third of 44,45,47 with complete loss of root in relation to 46 (Fig 1). After routine haematological investigations, incisional biopsy was performed, revealing plexiform type of ameloblastoma with dysplastic features. Preoperative investigations done and medical fitness obtained. Under general anaesthesia, intraorally triangular flap was raised from 43 till 47 with releasing incision in relation to 43, extraction of the canine, premolars and molars done along with enucleation and curettage of the lesion with adjunct electrocauterization (Fig. 2). The specimen was sent for histopathological study and reported section showing network of odontogenic epithelium with clear distinction of peripheral and central cells. Some peripheral cells showed reversal of polarity (Fig.3). The central cells showed stellate cells and cystic degeneration in connective tissue stroma and confirmed as Plexiform type of ameloblastoma.

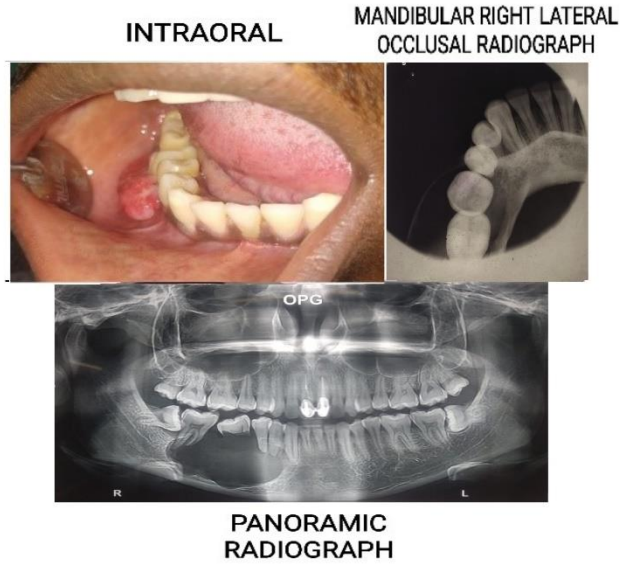

Figure 1 showing intraoral presentation and radiographic appearance

Figure 2 showing intraoperative image and excised specimen

DISCUSSION

Ameloblastoma has become an entity eliciting discussion and controversies because of increased frequency, and different clinical variants, high impulse for infiltration and reoccurence [6]. The unicystic variety, is more frequent among 20 and

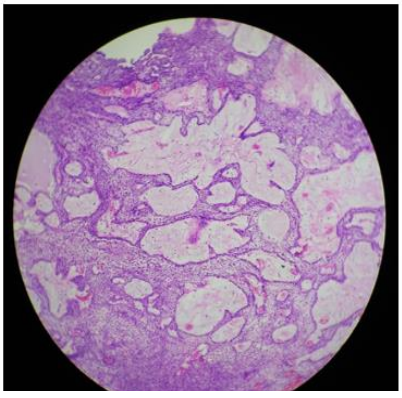

Figure 3 showing histopathology presenting plexiform type of ameloblastoma

30 years of age [1,2]. Eventhough about 10-15% of ameloblastomas are associated with a non-erupted tooth [7]; in the present case, a large plexiform ameloblastoma found in the mandibular molar region, which was not present with an unerupted tooth which manifested as proliferation of the soft tissue intraorally that speculates the aggressiveness to perforate the cortical bone. A similar case was documented in literature by Raghavendra Shetty et al [8]. Gardner and Russell documented that the recurrence rate of the plexiform unicystic ameloblastoma after enucleation or curettage is much less than that of the typical solid or multicystic arneloblastoma. This low recurrence rate indicates that these lesions should be treated by enucleation, rather than by marginal or segmental resection as is generally required for the solid or multicystic type of ameloblastoma [9]. The recurrence rate for unicystic ameloblastoma is reported to range from 10.7% to almost 25%, which is much lower than that of conventional ameloblastoma that are treated only by enucleation or curettage [10]. On this basis, in the present case was done enucleation with curettage as effective surgical treatment. Cases of ameloblastoma varies with their histologic pattern and biologic presentation which anticipates its aggressive behaviour. Prognosis is good if an early diagnosis of the lesion is made with prompt surgical intervention.

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