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DENTIGEROUS CYST MIMICKING AMELOBLASTOMA: CASE REPORT & REVIEW

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ABSTRACT

Dentigerous cysts (DCs) are one of the most common types of cysts which arise in the jaw. A typical dentigerous cyst clinically presents as an asymptomatic, unilocular radiolucency which encircles the crown of an unerupted or an impacted tooth. In most of the cases, the analysis of a dentigerous cyst is straight forward; but even radiographically, a 'typical' dentigerous cyst can be identified as something else, such as an odontogenic keratocyst [a keratocystic odontogenic tumour (KCOT)] or a unicystic ameloblastoma on histological analysis. The histological diagnoses of these lesions are consequently critical. We are reporting a case of an ameloblastoma, which arose in the wall of a dentigerous cyst. The clinical, radiographic characteristics were similar to those of dentigerous cysts. Enucleation was done intraorally under local anesthesia. Post-operative excisional biopsy revealed strands and cords arising from the cystic lining, which are evocative of ameloblastoma.

KEYWORDS: Dentigerous cyst, Ameloblastoma, Impacted Teeth**.**

INTRODUCTION

Odontogenic cysts and tumors are common pathologic lesions occurring in the hard and soft tissues of oral cavity. The ameloblastoma present more often as multilocular radiolucent lesions than as unilocular radiolucent lesions in the jaws. In this case report, we presented the clinical, radiographic and histopathological features of a dentigerous cyst mimicking ameloblastoma in the left posterior mandible.[1]

CASE REPORT

A 19 years, old male patient reported to the Department of Oral medicine and Radiology with a chief complaint of swelling on left lower third of the face since 2 months. Patient was apparently alright 2 months back, then he noticed swelling on left lower third of the face since 2 months, swelling is painless but which is gradually increased to present size, for which patient has reported to department. His past dental, medical, family history was non-contributory. Also h/o trauma, toothache, fever, pus discharge, weight loss was noncontributory. Extraorally, [Fig.1] solitary, diffuse swelling present on lower third of left side of face extending superioinferiorly from 1cm above to the ala tragus line upto 1cm below the inferior border of mandible and anterioposteriorly from corner of mouth upto posterior border of ramus, which is approx. 4x4 cm in dimensions, adjacent skin is normal. Intraorally, [Fig. 2] solitary, oval swelling present on attached gingiva w.r.t. 36, 37 on buccal aspect extending anterioposteriorly from medial aspect w.r.t. 36 to retromolar area and superioinferiorly from cervical margin w.r.t. 36, 37 to buccal vestibule approxi. 2x2 cm in dimensions. Rotated teeth seen w.r.t. 37. No evidence of pus discharge, toothache. Swelling was hard, nontender on palpation. Radiographically, orthopantomography [Fig. 3] shows single, well defined, multilocular radiolucency with soap bubble appearance with corticated radiopaque border seen in Zone 5 & 6 of radiograph w.r.t. 36, 37, 38. extending superioinferiorly from hamular notch to inferior border of mandible and anterioposteriorly from mesial aspect of apical one third of root w.r.t 36 to 1 cm ahead of posterior border of

ramus of mandible approxi. 4x2cm. with displacement of teeth w.r.t 38 and root resorption w.r.t. 36, 37. Cone beam computed tomography [Fig no. 4] revealed single, well defined, multilocular radiolucency with soap bubble appearance with corticated radiopaque border with seen in coronal view of radiograph w.r.t. 36, 37. extending superioinferiorly from alveolar crest to inferior border of mandible and anterioposteriorly from mesial aspect of apical one third of root w.r.t 36 to hamular notch 77x41mm seen in coronal view. Displacement of teeth w.r.t 37, 38 and root resorption w.r.t.36, 37, pathological fracture seen in axial and sagittal view. Under local anesthesia, an aspiration which was done, revealed a straw-coloured fluid, which suggested that lesion was a dentigerous cyst w.r.t. 36, 37, 38. Enucleation done under local anaesthesia with excisional biopsy. Histopathological examination shows, lesion composed of plexiform pattern of odontogenic epithelium, lining cell do not shows nuclear atypia, central cells are loose, spindly or vaculated which diagnosed as plexiform amoloblastoma w.r.t. 36, 37, 38.

Fig. 1

Fig. 2

Fig. 3

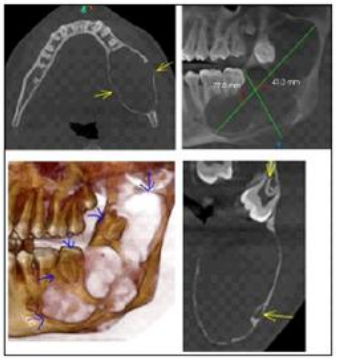

Fig. 4

DISCUSSION

A dentigerous cyst is the most common cause of pericoronal radiolucency which is associated with impacted teeth or unerupted teeth.[2] As they are asymptomatic, dentigerous cysts are usually analyzed on routine dental radiographs. The diagnosis of a dentigerous cyst is based on a combination of radiographic and histopathological features.[3] Dentigerous cysts form within the lining of the dental follicles when fluid collects inside the follicular epithelium and the crown of developing or unerupted tooth. Most of the dentigerous cysts manifest in the second and third decades of life, with peak incidences in teenagers, frequently developing around the crowns of mandibular third molars.[4] as it was seen in this case. An ameloblastoma is a benign and a locally aggressive tumor which mostly arises from the mandible or less commonly, from the maxilla. Unicystic ameloblastomas are variants of ameloblastomas, which were first defined by Robinson and Martinez, which refer to those cystic lesions that show clinical and radiological features of odontogenic cysts, but which on histological examination, show typical ameloblastomatous epithelium which lines part of the cyst cavity, with or without a luminal or mural tumor proliferation.[5] Before, this variant had been mentioned to as a mural or an intra luminal ameloblastoma. Ackerson classified this entity into three histological groups: luminal unicystic ameloblastoma, intraluminal / plexiform unicystic ameloblastoma and mural unicystic ameloblastoma. Fifteen percent to 20% of all unicystic ameloblastomas form in the wall of dentigerous cysts. Since 1925, many had reported the development of ameloblastomas inside the walls of odontogenic cysts, among which the usually cited were dentigerous cysts.[6] The immuno-histochemical data on Ki-67 expression in ameloblastomas which arise from dentigerous cysts confirm the hypothesis that ameloblastomas which arise from dentigerous cysts have a biological behavior which is similar to that of unicystic ameloblastomas.[7] The term, 'plexiform unicystic ameloblastoma' refers to a pattern of epithelial proliferation that has been labelled in cystic lesions of the jaws.

It has been considered as a hyperplastic epithelium, rather than an ameloblastoma by some pathologists, because it does not exhibit histological criteria which were previously accepted for ameloblastomas. Gardner et al., in their article, provided histological evidence that plexiform unicystic ameloblastomas were in fact, variants of conventional unicystic ameloblastomas, by writing ten cases of unicystic ameloblastomas that exhibited both patterns. Additional evidence of the ameloblastomatous nature of plexiform unicystic ameloblastomas is that their biological behavior, even when this pattern occurs alone, is similar to that of conventional unicystic ameloblastomas.[8] Incidence of ameloblastomas in children and adolescents who are below 18 years of age is uncommon. Only 14.6% of cases ameloblastomas were seen in children and adolescents among 206 cases which were evaluated by Lucas.[9]

CONCLUSION

Ameloblastoma has a high rate of local recurrence usually due to late diagnosis because of its poor symptoms and low occurrence and if it is not adequately removed. The success aspect related with the treatment is

the early diagnosis and to correlate the histopathologic findings with clinical and radiographic features which might change the final treatment plan.

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