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ADENOMATOID ODONTOGENIC TUMOR OF MAXILLA – A RARE CENTRAL EXTRAFOLLICULAR CASE REPORT."

Dental Science

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ABSTRACT

Adenomatoid odontogenic tumor (AOT) is a unilocular, pericoronal radiolucency in the maxillary anterior region of the jaw with females prediction. Rarely, these tumors present with varied clinical features. A case of AOT of the maxilla is reported with unusual features such as central vaiety with extrafollicular type. The role of radiology in diagnosis of atypical AOT is extremely important. The unique radiological manifestations of the lesion helped in the diagnosis, and it was managed conservatively with no evidence of recurrence.

KEYWORDS

Adenomatoid Odontogenic Tumor; Maxilla; Extrafollicular; Root displacement.

Introduction

Adenomatoid odontogenic tumor (AOT) is benign odontogenic tumor arising from enamel organ epithelium.[1] Although this tumor has been believed to be a hamartomatous, non agressive rather than a true neoplasm.[2,3] Based upon their location in the jaws, they may be central or peripheral variety. Central tumors may be further divided into follicular type which are associated with impacted teeth & extrafollicular type which are not associated with impacted teeth.[4] Two thirds of the intrabony cases have scattered radiopacities within the radiolucency & intraoral radiographs are better suited for displaying the discrete calcific deposits rather than panoramic radiographs.[5,6] A case of adenomatoid odontogenic tumor with unusual manifestations is presented highlighting the role of radiology in the diagnosis of such lesions.

Case report

A 16-year-old male patient reported to our institution with the chief complaints of swelling in upper front jaw region since 2 years. The lesion had progressively increased in size. H/O exfoliation of teeth in same region two years back. There was no history of trauma, anesthesia or paresthesia of the lower lip or jaw. no H/O any other symptoms like pain, fever or discharge from the same region & no H/O recurrence of swelling.

Extraorally facial asymmetry seen on left side of upper lip measured about 2 cm×1 cm extending from the midline of upper lip to the ala of nose & Superoinferiorly it extended from the floor of the nose to the upper border of the upper lip. The skin over the swelling and the surrounding area appeared normal and the margins were diffuse. On palpation, there was no local rise in temperature, non tender, no discharge. (fig.1)

Intraoral examination revealed swelling 4 cm×3 cm obliterating the labial vestibule extending from midline to the distal aspect of canine. superoinferiorly it extend from middle third of labial aspect of upper teeth to the labial vestibule. The swelling was firm to soft in consistency. The teeth were nontender on percussion. The teeth associated with the swelling - the left side of the incisors, canine. On palpation, swelling was non tender, non fluctuant, non pulsatile, non compressible, non reducible no discharge. (fig.2)

After keep in mind about the H/O of exfoliation of tooth in same region, age & sex of the patient, a working diagnosis of residual cyst was considered which may be arises from a periodontal ligament of the lost tooth.

Dentoalveolar abscess, Globulomaxillary cyst, Radicular cyst, AOT, Odontome & Fibro osseous lesion were considered in the differential diagnosis.

The patient was subjected to radiographic examination including panoramic and intraoral radiographs. As the lesion was related with the maxillary anterior region so panoramic radiograph is not an ideal radiograph for examination & diagnosis of anterior region of jaws but just for correlating the number of impacted teeth, number of teeth present & absent clinically as well as radiographically. (fig.3)

IOPA shows unilocular radiolucency surrounded by smooth, round, continuous & corticated outline, A few radiopaque flecks of about 1-2 mm were noted. Teeth associated with the lesion showed loss of the lamina dura and the periodontal ligament space. The roots were tipped distally. (fig.4)

The maxillary anterior topographic occlusal radiograph revealed a several radiopaque foci of about 1-2 mm were seen scattered throughout the radiolucent shadow, which were less evident in the panoramic radiograph. (fig.5)

The interior of the lesion may contain many small radiopaque flecks giving rise to *milky way lumen appearance* to the lesion.

A radiographic diagnosis of central extrafollicular variety of adenomatoid odontogenic tumor (AOT) was arrived at considering the multiple scattered radiopaque flecks in the lesion not associated with an unerupted impacted tooth.

Hence, a differential diagnosis of other mixed lesions such as calcifying odontogenic cyst and calcifying epithelial odontogenic tumor was also considered.The lesion was surgically enucleated. (fig.6) Macroscopically, the mass was well encapsulated with cystic areas. Histopathological examination revealed sheets, ducts, and whorls of darkly staining ovoid to round epithelial cells suggestive of odontogenic epithelial cells. The duct-like structures were lined by columnar cells. A few basophilic calcifications were also observed. Small cystic areas containing degenerated cell debris were noted in the focal areas. The supporting connective tissue stroma was loose and less cellular in nature. (fig.7) Based on these findings, a histopathologic diagnosis of adenomatoid odontogenic tumor was made.

The patient was under follow-up and had not shown any signs of recurrence six months after surgery.

Discussion

Our reported case had typical presentations of AOT in that it occurred in a 16-year-old male patient in the anterior maxilla and presented as a extrafollicular radiolucency with radiopaque flecks which included its small size, unilocularity. AOT generally does not exceed 1-3 cm in diameter.[7,8] Most cases of AOTs described in the literature have be observed in the maxilla.[9,10] AOT present an asymptomatic slow growing swelling commonly associated with unerupted tooth. It represents 3% of odontogenic tumors of which 73% are the central follicular type.[11] A radiolucent lesion containing septae is said to be septated or multilocular. Intraosseous AOT may cause displacement of the neighboring teeth & root resorption is a very rare finding.[12-15] Conservative surgical excision is the treatment of choice for AOTs.

However, recurrences have been reported after conservative treatment.[16] Hence, careful follow-up should be conducted. Follow-up is of immense importance, especially in our case, considering the rather unusual and aggressive presentation of the tumor. The patient has been asymptomatic and has not shown any signs of recurrence six months after surgery.

Conclusion:

A rare case of cystic extrafollicular type of AOT of the maxilla with a unilocular mixed radiolucent, radiopaque appearance and root displacement was reported. plain radiographs guide the diagnosis of such lesions. Although histopathology can provide a confirmation of diagnosis.

Fig. 1 Extraorally diffuse swelling

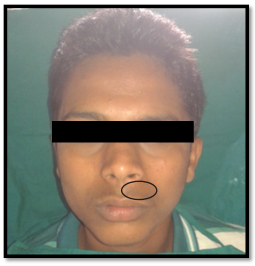


Fig. 2 Intraoral photographs

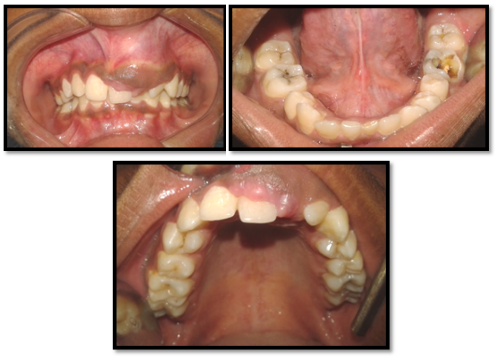


Fig. 3 OPG

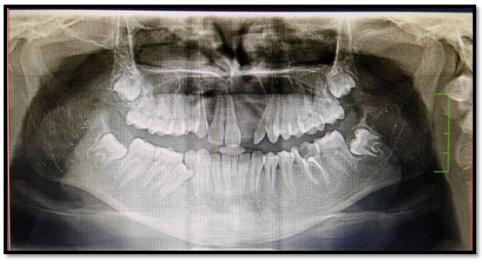


Fig. 4 IOPA

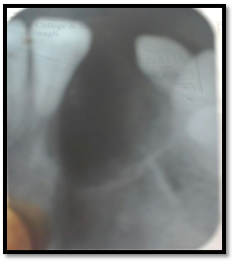


Fig. 5 Occlusal radiograph

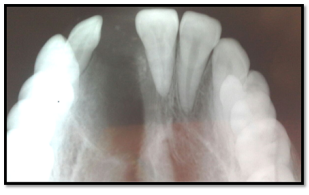


Fig. 6 Surgical photographs

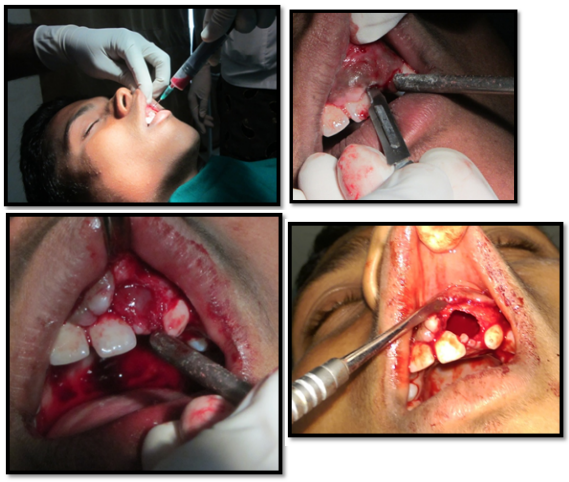
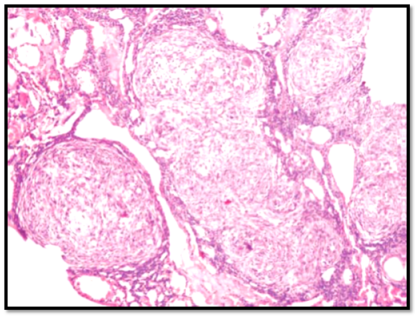


Fig. 7 Histopathological photograph



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