

CLINICAL PRESENTATION AND MANAGEMENT OF ADENOMATOID ODONTOGENIC TUMOR

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ABSTRACT

To document the clinical presentation and treatment protocols for adenomatoid odontogenic tumor in the oral cavity, this study was carried out at de, Montmorency College of Dentistry / Punjab Dental Hospital, Lahore-Pakistan. The sampling technique was purposive. Six cases of AOT were recorded. The age range was 11-16 years (mean 13.8 years) with 4 cases in males (66.6%). Maxillary involvement was seen in 5 cases (83%). Only one case presented with mandibular involvement (left side). AOT is a relatively uncommon lesion seen primarily in the adolescents. It should be managed at an early stage to prevent damage to the adjacent teeth

Key words: Adenomatoid, odontogenic, tumor, maxilla, canine

INTRODUCTION

Adenomatoid Odontogenic Tumour (AOT) is a benign (hamartomatous), noninvasive odontogenic lesion with slow but sustained growth. It is relatively uncommon and accounts for about 3% -7% of all odontogenic tumors¹. The lesion originates from odontogenic epithelium (enamel organs or dental lamina remnants) with inductive influence on odontogenic ectomesenchyme and consequent production of dentinoid material.

AOT is predominantly found in young and female patients, located more often in the maxilla in most cases associated with an unerupted permanent tooth¹. However, it has been documented in the molar region^{2,3}.

Radiographically, AOT usually appears as a circumscribed, unilocular radiolucency and may be associated with an unerupted tooth, most often a canine.

On microscopic examination the lesion commonly presents as a central (follicular, extrafollicular) or a peripheral entity.

AOT responds well to conservative enucleation and recurrences are seldom reported.

PATIENTS AND METHODS

This study was carried out at the department of oral and maxillofacial Surgery, de, Montmorency College of Dentistry / Punjab Dental Hospital Lahore and the department of paediatric oral and maxillofacial Surgery, Children's Hospital, Lahore Pakistan. The duration of this study was from February 2001 to June 2005. It was a descriptive type of study with purposive sampling.

Six patients presented with features of AOT. Routine per-operative work up was done and after informed consent, incisional biopsy was performed in all cases to

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TABLE 1: CLINICAL PRESENTATION OF ADENOMATOID ODONTOGENIC TUMOR

Case No.	Age	Sex	Site	Presentation
1	16	F	Right Maxilla	Extended from the distal aspect of the lateral incisor to the mesial aspect of the first molar. Canine and premolars failed to erupt
2	13	M	Right Maxilla	Extended from the distal aspect of central incisor to the mesial aspect of the 2 nd premolar. Lateral incisor, canine and 1st premolar unerupted.
3	14	M	Right Maxilla	Extended from the distal aspect of lateral incisor to the mesial aspect of the Pt premolar. Canine unerupted
4	12	M	Left Maxilla	Involved the canine tooth alone, which was still high and unerupted.
5	13	M	Left Mandible	Extended from the distal aspect of the lateral incisor to the distal aspect of the canine. Canine failed to erupt.
6	15	F	Right Maxilla	Extended from the distal aspect of central incisor to the mesial aspect of the 2 nd premolar. Lateral incisor, canine and 1st premolar unerupted.

confirm the diagnosis of AOT. All lesions reported in this series were treated by conservative surgical enucleation. The diagnosis of AOT was reconfirmed by excisional biopsies.

RESULTS

Six cases of adenomatoid odontogenic tumor were recorded during the period of study (table 1). The age range was 11-16 years (mean 13.8 Years) with four cases occurring in males (66.6%). Maxillary involvement was seen in five cases (83%) with the right side being involved in four cases. Only one case presented

with mandibular involvement (left side). In all cases included in this series, multiple teeth adjacent to the lesion failed to erupt.

Case No.1 is illustrated in (Fig.1 & Fig. 2) Interestingly radiographic evidence of calcification within the tumor was evident in only three cases. All of the six cases proved to be intra-osseous, follicular variants on histopathology.

No recurrence was seen in any of the six cases following surgical enucleation, after a follow-up period of one year.



Fig. 1. Extra-oral view of the patient



Fig. 2. Intra-oral view of the lesion; note the absence of teeth in the involved region



Fig. 3. OPG view showing a well circumscribed lesion in the canine-premolar region



Fig. 4. The excised specimen; note the marked pigmentation

DISCUSSION

This is probably the first series on AOT being reported from Pakistan.

The M: F ratio in this study was 2:1 in contrast to the reported female predilection. However, other studies have also reported a higher occurrence of AOT in males ^{4,5,6}.

The clinico-radiographic features of AOT may simulate a variety of lesions including dentigerous cysts, calcifying odontogenic cysts, calcifying epithelial odontogenic tumors etc'. Discriminant analyses using radiographs have been described to differentiate tumors from cystic lesions of the oral cavity ⁸ but this approach may have significant chances of error. MRI findings have reported to be more helpful in this regard'.

Melanin pigmentation has been rarely reported in AOT⁹ and interestingly was evident in the excised specimen in one of the cases (Fig. 4). Histopathology confirmed the presence of melanin within the tumor epithelium. However, the precise histo-pathogenesis of melanin pigmentation could not be ascertained.

Recurrence is usually not reported following conservative surgical enucleation^{10, 11, 12} and the author obtained similar postoperative results in this series.

CONCLUSIONS

AOT is an uncommon lesion seen primarily in the adolescents. Given its sustained growth potential, it should be managed at an early stage to prevent damage to the adjacent teeth.

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