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Research Article

**MANAGEMENT AND CLINICAL PRESENTATION OF  
ADENOMATOID ODONTOGENIC TUMOR****<sup>1</sup>Dr. Shaista Aziz, <sup>2</sup>Dr. Fatima, <sup>3</sup>Dr. Fariha Sameen, <sup>4</sup>Dr. Mohsin Majeed, <sup>5</sup>Dr. Sara Izhar**  
Nishtar Institute of Dentistry, Multan<sup>1,2,3,4,5</sup>**Article Received:** December 2018    **Accepted:** February 2019    **Published:** March 2019**Abstract:****Objective:** To document the clinical presentation and treatment protocols of the adenomatoid odontogenic tumor in the oral cavity.**Study design:** A descriptive study.**Location and Duration:** In the Oral and Maxillofacial Surgery Department of Nishtar Institute of Dentistry (NID), Multan for One-year duration from November 2017 to October 2018.**Methods:** The sampling technique was deliberate. Six cases of AOT were recorded. The age range was 11-16 years (mean 13.8 years) and there were 4 (66.6%) cases in males.**Results:** Maxillary involvement was present in five patients (83%). Only one case had a complaint of the mandible (left side).**Conclusion:** AOT is a relatively rare lesion, especially in adolescents. It should be applied at an early stage to prevent damage to adjacent teeth.**Key words:** canine, odontogenic, adenomatoid, maxilla, tumor.**Corresponding author:****Dr. Shaista Aziz,**

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**INTRODUCTION:**

Adenomatoid odontogenic tumor (AOT) is a non-invasive benign (hamartomatous) odontogenic lesion with slow but continuous growth. It is relatively rare and accounts for approximately 3-7% of all odontogenic tumors [1-3]. The lesion originates from the odontogenic epithelium (enamel or dental laminae residues) which have inductive effect on odontogenic ectomesenchyme and subsequent production of dentinoid material. AOT is predominantly found in young patients and women, most commonly associated with a permanent tooth in the maxilla that has not emerged in most cases. However, it is documented in the molar region [4-6]. Radiographically, AOT is often seen as a limited unilocular radiolucency and may be most often associated with an unerupted tooth, which is a canine mostly. In the microscopic examination, the lesion usually appears as a central (follicular, extrafollicular) or peripheral entity [7-9]. AOT

responds well to protective enucleation and relapses are rarely reported.

**MATERIALS AND METHODS:**

This study was performed in the Department of Oral and Maxillofacial Surgery of Nishtar Institute of Dentistry (NID), Multan for One year duration from November 2017 to October 2018. This is a type of descriptive study with purposive sampling. Six patients showed AOT characteristics. Perioperative routine study was performed and an incisional biopsy was performed in all cases to confirm the diagnosis of AOT following informed consent. All lesions reported in this series were treated with enucleation by conservative surgery. The diagnosis of AOT was confirmed by excision biopsies.

**RESULTS:**

Six adenomatoid odontogenic tumor cases were recorded during the study period (Table 1).

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 <sup>nd</sup> 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 <sup>nd</sup> premolar. Lateral incisor, canine and 1st premolar unerupted.

The age range was 11-16 years (mean 13.8 years) and there were four cases (66.6%) in males. Maxillary involvement was observed in five patients (83%) and four patients with the right case involvement. Only one case had a complaint of the mandible (left side). In all cases in this series, multiple teeth adjacent to the lesion did not erupt.



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

Case No. 1 (Figure 1 and Figure 2). In three cases, evidence of radiographic calcification within the tumor was evident. Six patients had intra-osseous and follicular variants in histopathology.

After a one-year follow-up period, no recurrence was observed in any of the six patients after surgical enucleation.

#### DISCUSSION:

This is probably the first series of AOTs reported from Pakistan. In this study, M: F ratio was 2: 1, unlike the reported female preference. However, the incidence of AOT was reported to be higher in males in other studies<sup>10-12</sup>. Clinical-radiographic features of AOT can simulate various lesions including dentigerous cysts, e.g. calcification of odontogenic cysts, calcification of odontogenic epithelial tumors, etc. Discriminant tests using radiography to separate tumors from cystic lesions of the oral cavity have been described, but this approach may have significant potential for error. MRI findings are more useful in this regard<sup>13-14</sup>. The pigmentation of melanin was rarely reported in AOT and was interestingly apparent in the specimen extracted in one of the cases (Figure 4). Histopathology confirmed the presence of melanin in the tumor epithelium<sup>15</sup>. However, the exact histopathogenesis of melanin pigmentation could not be determined. Recurrence is usually not reported after conservative surgical enucleation, and the author received similar postoperative results in this series.

#### CONCLUSION:

AOT is a rare lesion especially seen in adolescents. Given the potential for continuous growth, it should

be managed at an early stage to prevent damage to adjacent teeth.

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