

ADENOMATOID ODONTOGENIC TUMOR IN AN ADOLESCENT : A CASE REPORT

Dr Dipankar Halder*, Dr Mekala Divya*, Dr. Nilanjana Deb*
Dr. Prosanta Kumar Mondal**, Dr. Soumen Pal***

ABSTRACT

Adenomatoid odontogenic tumor is benign odontogenic tumor. Surgical enucleation is sufficient to treat this tumors. Once excised recurrence is rare. We report a case of surgical enucleation of Adenomatoid Odontogenic Tumor in 12 year old male who presented left sided jaw swelling with unerupted canine. In one year follow up the healing is satisfactory.

INTRODUCTION

Adenomatoid odontogenic tumor is a benign slow growing lesion of epithelial origin¹⁻⁵ and is considered as an uncommon tumor, occurs mostly in association with unerupted maxillary canine. WHO defined AOT as 'A tumor of odontogenic epithelium with duct like structures and with varying degrees of inductive changes in connective tissue. The tumor may be partly cystic and in some cases the solid lesion may be present only as masses in the wall of a large cyst. It is generally believed that the lesion is not neoplasm'. Previously it was called Adenoameloblastoma. First reported case of AOT probably was in 1907 by Dreyblatt¹⁻³. Later in the year 1948 the lesion was first recognized as distinct entity by Stafne.

Some investigator consider AOT as a benign neoplasm and it recurrence is rare.³

Giansanti et al, have concluded that the AOT is always associated with unerupted tooth similar to that of dentigerous cyst indicating that pathogenesis might due to disturbance or irritation of the odontogenic epithelium at the late stage of tooth development^{6,9}.

KEY WORDS

Adenomatoid odontogenic tumor, Impacted canine, Enucleation, Recurrence.

CASE REPORT

A 12 years old boy presented to the department of pediatric and preventive dentistry of with swelling of left side of his face near the naso-alveolar fold since 1 month which has caused the facial disfigurement (figure1). On examination the color of overlying mucosa and skin was normal with surrounding mucosa and skin intraorally, over retained primary canine and 2nd molar is seen, swelling is bony hard well circumscribed and painless on palpation. The patient's medical history was unremarkable. OPG revealing a retained primary canine unerupted left maxillary canine well circumscribed radiolucency with a radiopaque border, causing pathological migration of maxillary 1st premolar (figure 2). A CBCT of maxilla was done. It revealed well circumscribed radiolucent area associated with unerupted maxillary canine between apices of maxillary lateral incisor and premolar on the left side. There was deviation of first

ABOUT THE AUTHORS

*Post Graduate Trainee

** Professor And Head Of The Department

*** Associate Professor

Department Of Pediatric And Preventive Dentistry
Dr.R Ahmed Dental College & Hospital

CORRESPONDING AUTHOR

Dr. Dipankar Halder

Post Graduate Trainee

Department Of Pediatric And Preventive Dentistry

Dr. R Ahmed Dental College & Hospital

dipankarnbdc80@gmail.com 7864917229



Figure 1 showing facial asymmetry at nasolabial fold on left side of the cheek



Figure 2 OPG revealing an unerupted left maxillary canine well circumscribed radiolucency with a radiopaque border, causing pathological deflection of maxillary 1st premolar

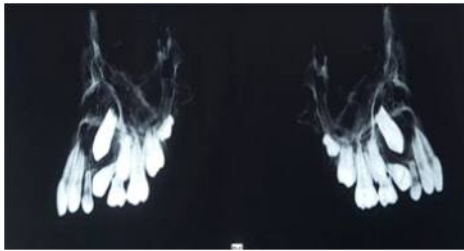


Figure 3, CBCT of maxilla buccal and palatal sectional view, showing impacted left maxillary canine with well-defined radiolucency and sclerotic radiopaque border

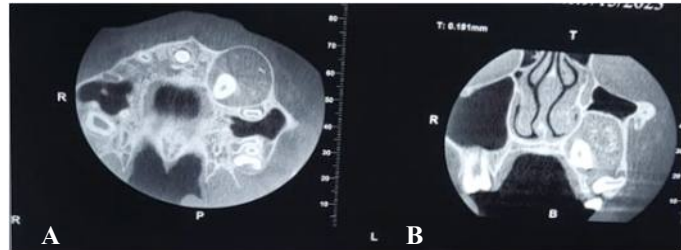


Figure 4, CBCT of maxilla axial (A) and coronal (B) sectional view, showing impacted left maxillary canine with well-defined border and relatively radiopacity in lesion, buccal extent causing expansion of buccal cortex and sclerotic radiopaque border and invasion to maxillary sinus respectively.

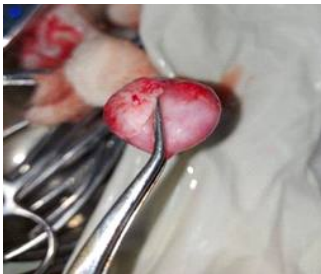


Figure 5 complete lesion enucleation



Figure 6: 8 months post-surgery



Figure 7 : OPG showing healing and no recurrence of lesion 8 months post -operatively

premolar due to extensive growth of the lesion. The clinical and radiographic features suggested that it might be benign odontogenic tumor. As it was associated with impacted tooth the differential diagnosis may be dentigerous cyst (figure 3, 4). The surgery was planned under local anesthesia after obtaining informed consent from patient and his parents. A mucoperiosteal flap was elevated from labial aspect of upper left central incisor and buccal aspect of upper left first molar to expose the lesion. The cortical bone was thin and resorbed in some areas. The lesion was enucleated (figure 5). Surrounding area and roots of adjacent involved teeth were curetted well, removal of deflected 1st premolar

and over retained deciduous molar was done while retaining a primary canine. The sutures were given to close the mucoperiosteal flap.

Enucleated tissue is sent for histopathological examination to confirm the histopathological diagnosis. Antibiotics were prescribed for 5 days to prevent post operative infection. After 1 week sutures were removed. After 3 months a panoramic radiograph was advised and it revealed satisfactory healing.

Eight month post operative the patient is completely asymptomatic with no gross facial asymmetry (figure 6) and OPG revealed bony healing and no sign of recurrence (figure 7).

DISCUSSION

AOT usually affects patients under 20 years of age, lesions have intraoral and an extraoral swelling which is painless usually involving anterior maxilla which is same in this present case. AOT is more frequent in females but here it was reported in male. The tumor is often associated with unerupted tooth apart from some exceptions. It was observed that the present tumor also associated with unerupted maxillary canine. Radiographically the AOT looked like dentigerous cyst or unicystic ameloblastoma associated with Impacted canine while the histopathology investigation showed the presence of fibrous connective tissue stroma and odontogenic epithelial cells in sheets and tubules indicating the diagnosis Adenomatoid odontogenic tumour.

REFERENCES

1. Rajendran, R & Sundharam, Sivapatha. (2006). Shafer's Text Book of Oral Pathology.
2. John J. B., John R. R. Adenomatoid odontogenic tumor associated with dentigerous cyst in posterior maxilla: a case report and review of literature. *Journal of Oral and Maxillofacial Pathology*. 2010;14(2):59–62. doi: 10.4103/0973-029x.72502. [DOI] [PMC free article] [PubMed] [Google Scholar]
3. BS Manjunatha A Mahajan BM Mody V Shah Adenomatoid Odontogenic Tumor (AOT) Arising from a Dentigerous Cyst: Literature Review and Report of a Case *J Maxillofac Oral Surg* 2012;14:23937
- 3.S Shaikh S Bansal RS Desai I Ahmad Aggressive adenomatoid odontogenic tumor of the mandible: A rare case report and review of the literature *J Oral Maxillofac Pathol* 2018;22:1S115
4. Baskaran P, Misra S, Kumar MS, Mithra R. Adenomatoid odontogenic tumor: A report of two cases with histopathology correlation. *J Clin Imaging Sci*. 2011;1:64. doi: 10.4103/2156-7514.92186. [DOI] [PMC free article] [PubMed] [Google Scholar]
5. Courtney RM, Kerr DA. The odontogenic adenomatoid tumor. A comprehensive study of twenty new cases. *Oral Surg Oral Med Oral Pathol*. 1975;39:424–35. doi: 10.1016/0030-4220(75)90086-9. [DOI] [PubMed] [Google Scholar]
6. Giansanti JS, Someren A, Waldron CA. Odontogenic adenomatoid tumor (adenoameloblastoma). Survey of 3 cases. *Oral Surg Oral Med Oral Pathol*. 1970;30:69–88. doi: 10.1016/0030-4220(70)90016-2. [DOI] [PubMed] [Google Scholar]
7. Philipsen HP, Reichart PA, Nikai H. The adenomatoid odontogenic tumor (AOT): An update. *J Oral Pathol Med*. 1997;2:55–60. [Google Scholar]
8. Philipsen HP, Reichart PA. The adenomatoid odontogenic tumour: Ultrastructure of tumour cells and non-calcified amorphous masses. *J Oral Pathol Med*. 1996;25:491–6. doi: 10.1111/j.1600-0714.1996.tb00303.x. [DOI] [PubMed] [Google Scholar]
9. Philipsen HP, Reichart PA. The adenomatoid odontogenic tumour: Ultrastructure of tumour cells and non-calcified amorphous masses. *J Oral Pathol Med*. 1996;25:491–6. doi: 10.1111/j.1600-0714.1996.tb00303.x. [DOI] [PubMed]