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## Case Report

### Adenomatoid Odontogenic Tumour Of Maxillary Sinus: Literature Review And Report Of A Case

Dr. Abhishek Dutta<sup>1</sup>, Dr. Suraj Ahuja<sup>1</sup>, Dr. Usha Asnani<sup>2</sup>, Dr. Srivalli Natranjan<sup>2</sup>, Dr. Sushrut Vaidya<sup>2</sup>, Dr. Adil Gandevivala<sup>3</sup>

<sup>1</sup>Lecturer, Department Of Oral And Maxillofacial Surgery, MGM Dental College And Hospital, Kamothe , Navi Mumbai, India.

<sup>2</sup>Professor, Department Of Oral And Maxillofacial Surgery, MGM Dental College And Hospital, Kamothe , Navi Mumbai, India.

<sup>3</sup>Reader, Department Of Oral And Maxillofacial Surgery, MGM Dental College And Hospital, Kamothe , Navi Mumbai, India

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#### ABSTRACT

**Aim:** To report a rare case of Adenomatoid Odontogenic Tumour (AOT) arising from maxillary antrum associated with an impacted tooth. Background: Adenomatoid Odontogenic tumor (AOT) is an uncommon entity that accounts for about 3%-7% of all the odontogenic tumors. Its incidence is more in the anterior maxillary region. It is usually associated with an anterior maxillary impacted tooth and is more often asymptomatic. Though quite rare, its occurrence in the maxillary sinus has been reported in the literature.

**Case description:** We report a case of a 7- year- old boy with a swelling on the right side of his face and also over the palate which was asymptomatic except that it caused mild difficulty in breathing. An excisional biopsy was performed under general anesthesia and the specimen was sent for histopathological examination that confirmed it to be Adenomatoid Odontogenic Tumour. The patient is being followed up for one year and the lesion has not recurred yet.

**Conclusion and Clinical Significance:** We suggest that AOT should be considered in the differential diagnosis for the unilateral swelling appearing in posterior maxilla where a permanent tooth is missing in the oral cavity.

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**Corresponding Author:** Dr. Abhishek Dutta, Lecturer, Department Of Oral And Maxillofacial Surgery, MGM Dental College And Hospital, Kamothe , Navi Mumbai, India.

## INTRODUCTION:

### Background:

Adenomatoid Odontogenic tumor (AOT) is defined as “A tumor of odontogenic epithelium with duct-like structures and varying degrees of inductive change in the 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.”<sup>1</sup> It accounts for about 3% of all the odontogenic tumors. Although it is uncertain in origin, it has been suggested to arise from the residual odontogenic epithelium.<sup>2</sup> Staphne in 1948 first recognized this as a distinct pathological entity.<sup>3</sup> It occurs 1.5 times more frequently in maxilla than in mandible and about 90% appear in the anterior portion of the jaws. It is twice as common in females and commonly seen in second decades of life. About 73% of them are associated with unerupted teeth.<sup>4</sup> We present a case of Follicular type AOT arising in the left maxillary antrum associated with premolar in a 7-year-old boy who underwent surgical enucleation under GA.

### CASE DESCRIPTION:

A 7-year-old male patient reported to our department with a complaint of swelling on the left side of the face and nasal obstruction which was present for 6 months (Fig 1). There was deviation of the nasal septum. On

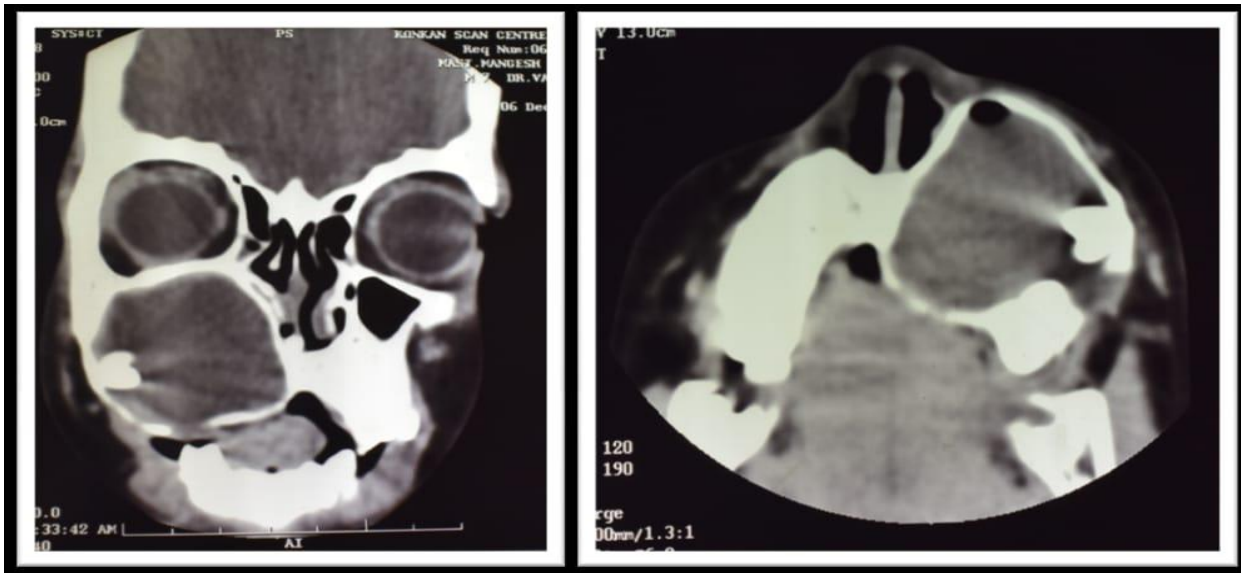
intraoral examination, a non-tender palatal bulge was seen extending from left upper canine to the molar region along with an ill-defined, non-tender swelling in the left upper vestibule of the mouth (Fig 2). The swelling was bony hard except that it was cystic at the alveolus in 64 region. There was no evidence of nasal discharge or oroantral or oronasal communication. On CT scan examination, the coronal slice revealed a large radiolucent lesion associated with the crown of 24 that caused expansion of the left maxillary sinus and a perforation in the alveolar bone. The axial view revealed compression of the lateral wall of nose thereby narrowing the airway passage (Fig 3). On aspiration, a straw-colored fluid was obtained. A working diagnosis of the dentigerous cyst was made and the lesion was enucleated along with the associated tooth under general anesthesia. On surgical exposure of the lesion, it was encountered that the left maxillary canine is also involved by the lesion and hence was also removed. The specimen was sent for histopathological examination that confirmed the diagnosis of AOT (Fig 4). The patient is being followed up for about one year and has improved the facial symmetry with no evidence of recurrence of the lesion.



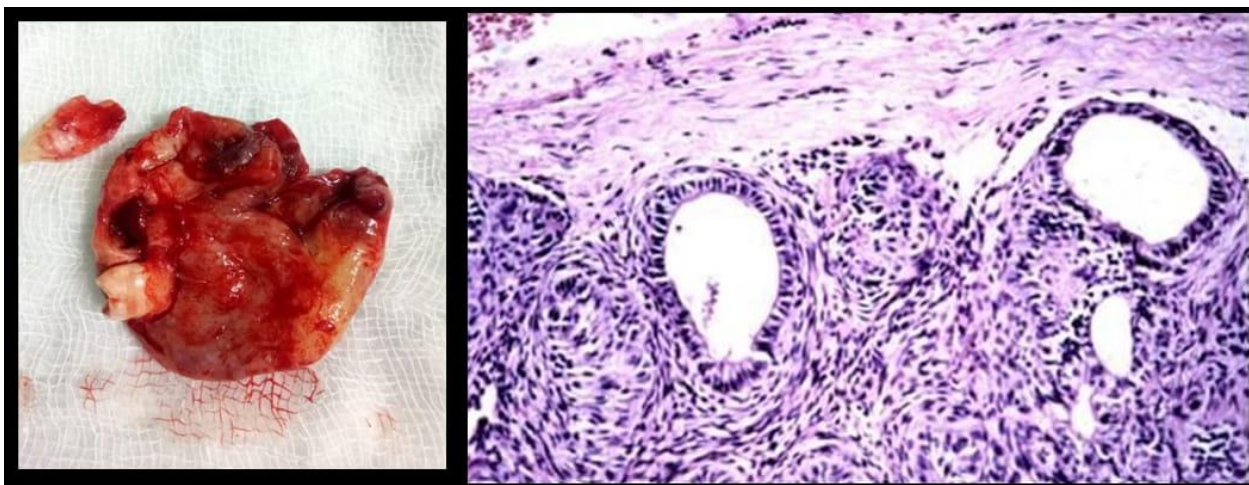
*Figure 1: Pre-operative image*



*Figure 2: Preoperative intraoral images showing palatal swelling and normal buccal vestibule*



*Figure 3: CT Scan Image showing involvement of maxillary sinus*



*Figure 4: Surgical specimen and the photomicrograph scan image (histopathology)*

**DISCUSSION:**

Stafne was the first to recognize AOT as a distinct pathological entity in 1948.<sup>5</sup> Philipsen and Birn in 1969 proposed the term AOT.<sup>6</sup> It is a benign lesion that has an odontogenic origin.<sup>7</sup> It is known to affect young population and is associated with impacted tooth usually the canine.<sup>8</sup> It is usually asymptomatic. Clinically, there may be a missing tooth or a slow-growing, asymptomatic swelling.<sup>9</sup> In the present case, the patient had a slow growing asymptomatic, hard swelling over the left side of the face thus giving an asymmetrical facial appearance. Also, there was a bulging on the left side of the palate extending from left maxillary canine to molar region and crossing the mid palatine area. The patient also complained of difficulty in breathing through the left nostril. Radiographically, the follicular type of AOT appears as a central lesion associated with an unerupted tooth thus mimicking a dentigerous cyst. Minute foci of calcifications may be seen on the radiograph that is a characteristic feature and not pathognomonic for AOT. It causes tooth displacement more than root resorption.<sup>10</sup> In our case, the CT scan revealed unerupted left maxillary premolar that was present at the lateral wall of maxillary sinus surrounded by a huge radiolucent lesion that extended superiorly up to the orbital floor, inferiorly perforated the alveolar bone, medially displaced the lateral nasal wall and laterally expanded the cortical bone. The treatment of choice for AOT is surgical enucleation. Recurrence of AOT is extremely rare.<sup>11</sup>

**CONCLUSION AND CLINICAL SIGNIFICANCE:**

We suggest that AOT should be considered in the differential diagnosis for the unilateral swelling appearing in posterior maxilla where a permanent tooth is missing in the oral cavity.

**Informed consent:**

A written informed consent has been taken from the father of the patient and from the patient as well.

**REFERENCES:**

- 1) Kramer IR, Pindborg JJ, Shear M. WHO International Histological Classification of Tumours. Histological Typing of Odontogenic Tumors. 2nd ed. Berlin: Springer Verlag; 1992.
- 2) Philipsen HP, Birn H. The adenomatoid odontogenic tumor. Ameloblastic adenomatoid tumor or adenoameloblastoma. *Acta Pathol Microbiol Scand.* 1969; 75: 375-8.
- 3) Stafne EC. Epithelial tumors associated with developmental cysts of the maxilla: A report of three cases. *Oral Surg Oral Med Oral Pathol.* 1948;1:887-94.
- 4) Philipsen HP, Reichart PA, Siar CH, Ng KH, Lau SH, Zhang X, et al. An updated clinical and epidemiological profile of the adenomatoid odontogenic tumour: a collaborative retrospective study. *J Oral Pathol Med* 2007;36:383-93
- 5) Lee JK, Lee KB, Hwang BN. Adenomatoid odontogenic tumor: A case report. *J Oral Maxillofac Surg.* 2000;58:1161-4.
- 6) Bedrick AE, Solomon MP, Ferber I. The adenomatoid odontogenic tumor: An unusual clinical presentation. *Oral Surg Oral Med Oral Pathol.* 1979; 48: 143-5. [http://dx.doi.org/10.1016/0030-4220\(79\)90051-3](http://dx.doi.org/10.1016/0030-4220(79)90051-3).
- 7) White SC, Pharoah MJ. *Oral Radiology. Principles and Interpretation.* 5th ed. St. Louis: Mosby; 2004. p. 431-3.
- 8) Chavan MS, Shete A, Diwan N. Critical evaluation of the radiological and clinical features of the adenomatoid odontogenic tumor. *Dentomaxillofac Radiol.* 2013; 42: 20120410. <http://dx.doi.org/10.1259/dmfr.20120410>.
- 9) Handschel JG, Depprich RA, Zimmermann AC, Braunstein S, Kübler NR., Adenomatoid odontogenic tumor of the mandible: Review of the literature and report of a rare case. *Head Face Med.* 2005;1:3.
- 10) Neville B. W. Update on current trends in oral and maxillofacial pathology. *Head & Neck Pathology.* 2007;1(1):75–80. doi: 10.1007/s12105-007-0007-40
- 11) Philipsen HP, Reichart PA, Zhang KH, Nikai H, Yu QX. Adenomatoid odontogenic tumor: biologic profile based on 499 cases. *J Oral Pathol Med* 1991;20:149–58

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