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ADENOMATOID ODONTOGENIC TUMOR IN ANTERIOR MAXILLARY REGION: A CASE REPORT

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ABSTRACT
Adenomatoid odontogenic tumour is a rare odontogenic tumour that is exclusively odontogenic epithelium in origin. This comprises of 3% of all odontogenic tumours. This report describes the surgical therapy, clinical course and morphological characteristics of an adenomatoid odontogenic tumour that developed in the left maxilla of a 20-year-old patient.

KEYWORDS: AOT, Odontogenic, Dentigerous Cyst.

INTRODUCTION

Dreibaldt in 1907 was the first to describe adenomatoidodontogenic tumor (AOT), which is an uncommon benign epithelial lesion of odontogenic origin known as pseudoadenoameloblastomaThe term Adenomatoidodontogenic tumor (AOT) was given by Philipsen and Birn in 1969. It has described by numerous authors under diverse terminology like “adamantoma”, “epithelial odontome”, “cystic adamantoma”, “adenoameloblastoma”, “tooth germ (or chorioblastomatous) cyst of the jaw”, “epithelial tumors associated with developmental cysts of the maxilla” and several more dating from 1877 In the World Health Organization classification of odontogenic tumors established in 1971, AOT was mentioned as a mixed odontogenic neoplasm, in other words, an epithelial tumor with an inductive e6ect on the odontogenicmesenchyme. There are three variants of AOT, the follicular type 73%; extrafollicular type 24%, and the peripheral variety 3%.AOT is a relatively rare distinct odontogenic neoplasm accounting for 2.2–7.1% of all odontogenictumours. It constitutes about 1.2% of all odontogenic tumors (OTs) in Caucasians and up to 9% of OTs in Black Africans.

CASE REPORT

A 16 years old female patient named Varsha reported to department of oral and maxillofacial surgery kothiwal dental college & research center with chief complaint of asymptomatic swelling in her maxillary left anterior teeth region since 2 months. The medical history and family history were insignificant. On general examination, the patient was apparently healthy. Gait was normal, built was thin, and all the vital signs were within normal limits. History of the patient revealed that she was apparently alright 2 months back, when she noticed retained tooth in her maxillary left anterior teeth region. OPG was adviced. After about 1 month she consulted in private clinic where extraction of retained deciduous tooth i.r.t.61 was done. After 15 days she noticed a swelling which increases in size gradually over time in maxillary left anterior vestibular region. Afterwards she reported to our department after 1 month for definitive treatment.

On extraoral examination mild facial asymmetry was present over the left side of face. Diffused swelling was present at left side extending superoinferiorly from nasal aperture to upper lip along with obliteration of left nasolabial fold.

Figure 1: Mild facial asymmetry present over the left side of upper lip.

Figure 2: Diffused swelling was present at left side extending superoinferiorly from nasal aperture to upper lip along with obliteration of left nasolabial fold.

Intra – oral examination revealed a solitary, well defined, roughly oval shaped gingival mass arising from the attached and free labial gingival margin. Overlying mucosa was intact, pinkish in color and diffused with smooth texture. Labial frenum and vestibular obliteration was present irt 21,22,23. Swelling was approximately 2cm anteroposteriorlyx2cm superoinferiorly in size.21 tooth was missing. On palpation swelling was non tender, fluctuant and compressible.

Figure 3: A Solitary, Well Defined, Roughly Oval Shaped Gingival Mass Arising From The Attached And Free Labial Gingival Margin.

Associated signs or symptoms such as pain, bleeding, discharge, numbness or fever were absent with poor oral hygiene.

Orthopantomogram shows impacted 21, a single well‑defined radiolucency seen in the upper left anterior region extending anteroposteriorly from mesial of 11 to distal of 23 and superoinferiorly from level of alveolar crest to the maxillary antrum superiorly with impacted 21. Retained deciduous 61. Root resorption with 22 and 23. Displacement of teeth with 22, 23. Loss of cortication seen with the inferior border of left maxillary sinus.

Figure 4: Orthopantomogram showing a single well-defined radiolucency in the upper left anterior region extending anteroposteriorly from mesial of 11 to distal of 23 and superoinferiorly from level of alveolar crest to the maxillary antrum superiorly with impacted 21.

CBCT was showing in its coronal section a well-defined radiolucency on left side extending superoinferiorly from alveolar crest to left floor of the maxillary sinus, along with radiopaque tooth structure lying within the radiolucency.

CBCT in axial section was showing radioluecency present in left anterior teeth region along with loss of cortication bucally.

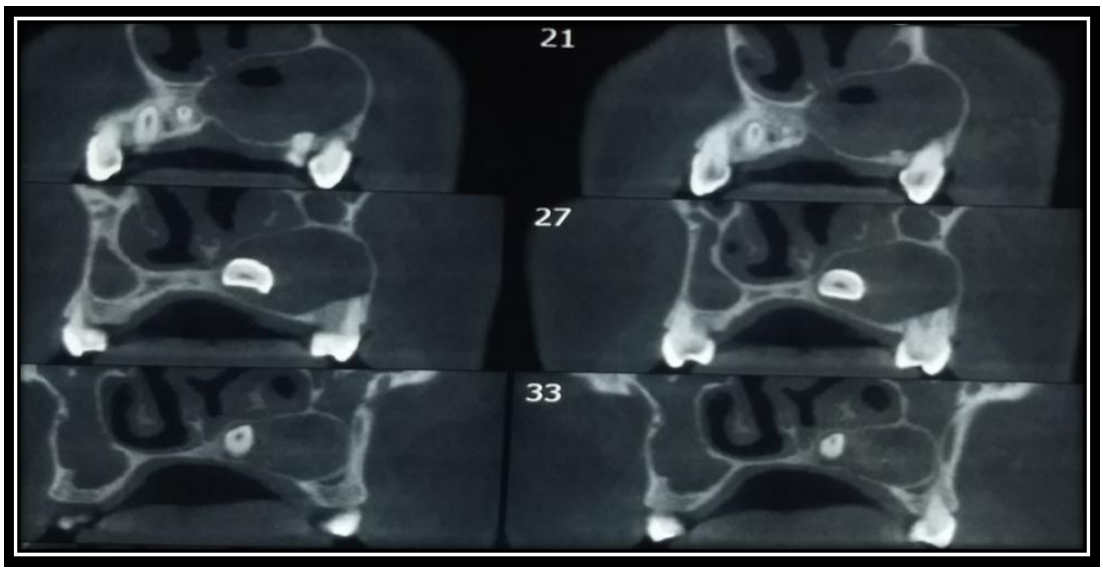

Figure 5: CBCT Coronal Section Showing A Well-Defined Radiolucency On Left Side Extending Superoinferiorly From Alveolar Crest To Left Floor Of The Maxillary Sinus, Along With Radiopaque Tooth Structure Lying Within The Radiolucency.

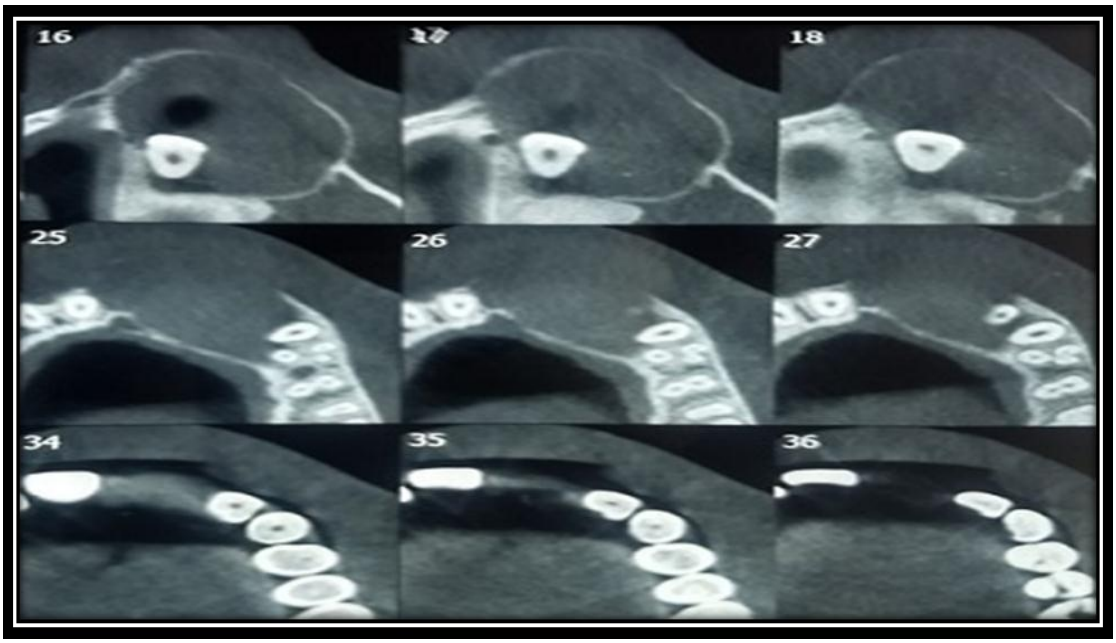

Figure 6: CBCT in Axial Section Showing Radioluecency Present In Left Anterior Teeth Region Along With Loss Of Cortication Bucally.

Based on the clinico-radiographical findings, clinical diagnosis was made of dentigerous cyst with differential diagnosis of odontogenic keratocyst, adenomatoid odontogenic tumor, gingival fibrous lesion ameloblastic fibroma, odontogenic myxoma, central giant cell tumor, calcifying epithelial odontogenic tumor. Pulp vitality test was done with no response from teeth i.r.t. 22 and 23 and 24,25 showed the response.

Following the routine haemogram, ECG and X-ray chest pre- anesthetic clearance was taken and enucleation of

the lesion and chemical cauterization was done with modified carnoy's solution along with extraction of 22,23 under general anesthesia.

Figure 7: Intraoperative Picture

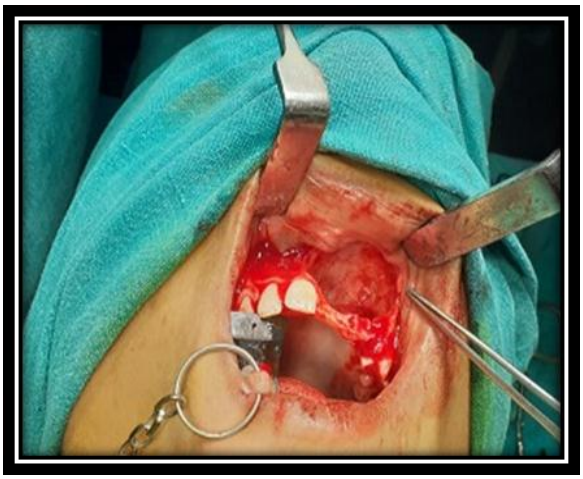

Figure 8: Showing Showing Intraoral Cavity After Enucleation of Pathology.

Figure 9: Showing Chemical Cauterization Done In Intraoral Cavity.

The excised mass was sent for the histopathological examination. Grossly specimen was roughly oval in shape with approximately 4cm X2cm.Specimen was creamy white bit soft tissue with brownish areas.Hard tissue bit projecting from one area of soft tissue suggestive of tooth. Hematoxylin and eosin stained sections of specimen was showing thick fibrous capsule lined by non stratified squamous epithelium at few areas circumscribing a soild intraluminal proliferation of tumor mass with sparse stroma. The epithelial proliferation was composed of whorls and strands of polyhedral spindle cells within which microcyst and pseudocyst formation is seen. Rosette like arrangement of cells is seen at areas. Focal collections of amorphous calcifications and extravasated RBC's are also seen within sheets of epithelium. Stroma is sparse containing few blood vessels and mild chronic inflammatory infiltrate. The histopathological examination was suggestive of Adenomatoid Odontogenic tumor.

Figure 10: Showing Enucleated Mass.

Figure 11: Showing Grossed Specimen.

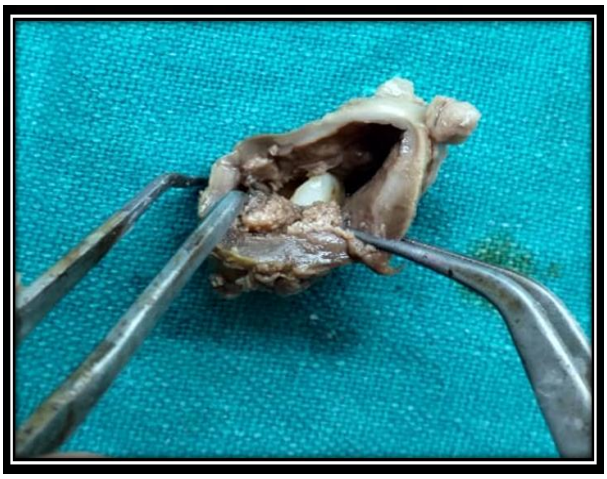

Figure 12: Gross Specimen Showing Thick Capsule Associated With Intraluminal Presence of Tooth i.r.t.21.

Figure 13: H&E Stained Section Showing Thick Fibrous Capsule Lined By A Non Statified Squamous Epithelium.

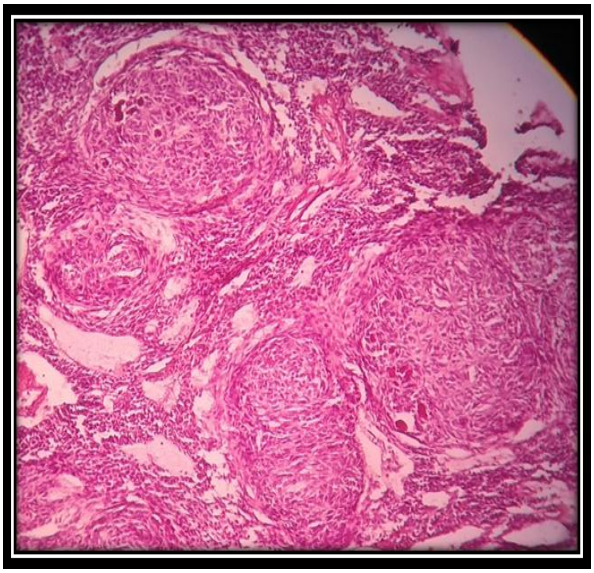

Figure 14: H&E Stained Section Showing Rosette Like Arrangment Of Cells.

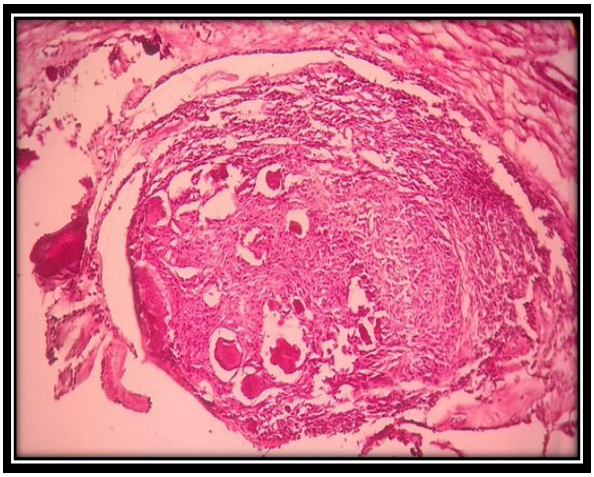

Figure 15: H&E Stained Section Showing Focal Collections of Amorphous Calcifications and Extravasated Rbc's Seen.

The oral defect was closed by primary intention(figure16). The patient reported facial swelling were solved after the surgery. The healing was uneventful without any complications and the patient is disease free after 6-month follow-up.

Figure 16: Immediate Post op.

Figure 17: Post Op Facial Profile.

Figure 18: Post Operative Facial Profile After 6 Month.

Figure 19: Showing Intra Oral Picture After 6 Month.

In conclusion, we have presented the rare case of a adenomatoid odontogenic tumour shows a slow and progressive growth, asymptomatic, accompanied by mild facial asymmetry associated with an unerupted tooth.The definitive diagnosis of AOT was given only after histological examination of the lesion.The benign behaviour, presence of capsule or clear demarcation of the lesion allow easy and complete removal, and low rates of recurrence justify a conservative surgical approach with complete enucleation of the lesion as the treatment of choice.

CONSENT

Informed consent was sought and obtained from the patient to publish this report.

CONFLICT OF INTEREST

The authors declare no conflicting interests.

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