CASE REPORT

ADENOMATOID ODONTGENIC TUMOR ARISING FROM MANDIBULAR PREMOLAR REGION: A RARE CASE REPORT

ABSTRACT

The adenomatoid odontogenic tumor is a rare tumor that comprises only 0.1 per cent of tumors and cysts of the jaw. The lesion is most frequently encountered in the second decade of life. Females are more commonly affected than males in a two to one ratio. Anterior maxilla is the most common site of occurrence. Unerupted permanent teeth were associated with this lesion in one-third of the cases. This case report describes a rare case of adenomatoid odontogenic tumor (AOT) arising in the mandibular premolar region of an eighty year old male.

Key words: Adenomatoid odontogenic tumor, Odontogenic tumor, mandibular premolar region

INTRODUCTION

Adenomatoid Odontogenic Tumor (AOT) is a distinct odontogenic neoplasm that was first recognized by Stafne in 1948. The AOT is a benign (hamartomatous) non-invasive lesion with a slow but progressive growth originating from the odontogenic epithelium, corresponding to 0.1% of the tumors and cysts of jaws. Clinically, the lesion usually appears as an asymptomatic slowly growing swelling generally associated with impacted teeth.

Radiographic features of AOT shows that it is a well-circumscribed unilocular pear shaped radiolucency with a normal to portrayed tooth, usually around the crown of an impacted anterior tooth. The lesion is typically radiolucent but may have small opaque foci distributed throughout, reflecting the presence of enameloid islands in the tumor tissue. When they are located between anterior teeth, divergence of roots may be seen.

Conservative management i.e. enucleation is all that is required. The AOT is a totally benign encapsulated lesion that does not recur. Recurrence seldom if ever occurs; it is ironic that it has been advocated to extract teeth associated with an AOT.

CASE REPORT

An 80 year old male patient reported to the department of Oral Medicine and Radiology, Institute of Dental Sciences, Bareilly, with the complaint of a swelling on lower front tooth region since 6 months. History revealed that the patient had swelling on his lower front tooth region 6 years back which was associated with mild pain. After that the patient got his lower front tooth removed by a local practitioner without any complications. Patient gave the history of recurrence of the swelling on the same region months back which was fluid filled and associated with pain. The pain was mild in nature. There was no history of fever, weight loss and anaesthesia or paraesthesia in the face.

Personal history revealed that the patient had history of chewing tobacco (Khaini) with lime 5-6 times per day for last 10 years. General physical examination revealed that the patient was moderately built and fit. There was no history of smoking or alcohol intake. Oral examination revealed that the patient was moderately built and fit. There was no history of smoking or alcohol intake. Extraoral examination revealed that face of the patient was moderately built and fit. There was no history of smoking or alcohol intake. Extraoral examination revealed that face of the patient was moderately built and fit. There was no history of smoking or alcohol intake.

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may be displaced. Large lesions can cause painless hard swellings. The
WHO has described the histological features of the tumor as follows: “…A
tumor of odontogenic epithelium with duct like structures and with
varying degree of inductive changes 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. It is generally believed that the
lesion is not a neoplasm”. The histopathological features of AOT shows
that it is usually partially cystic and surrounded by a well-developed
fibrous connective tissue capsule. The luminal surface is lined by a
reduced odontogenic epithelium that leads to thickened mural
proliferation of AOT which project into and partially or almost
completely fill a cystic lumen with tumor lobules. An epithelial
proliferation is composed of polyhedral to spindle cells. The pattern
is often lobular but may appear as a reticulum. Rosettes/duct-like structures
of columnar epithelial cells give the lesion its characteristic microscopic
feature.

AOT is a slow-growing tumor with three clinical subtypes: 1) Follicular
type (in 73% of AOT), the most common one is centrally located, with a
radiolucent unilocular cystic area associated with an unerupted or
impacted tooth (usually canine), simulating the image of a dentigerous
cyst. The second most common subtype is the extrafollicular variant
(24%), with a central location, but unrelated to any dental structure, and
may be confused with periapical cysts and other cystic or tumoral lesions
of the maxilla. The third and the most infrequent subtype is the
peripheral form (3%), it affects the gingival mucosa, and is often
preoperatively classified as a fibrous epulis or gingival fibroma.

Immunohistochemical studies of this tumor suggests expression of
keratin and vimentin in the tumor cells at the periphery of the duc
tubular or whorled structures. Amelogenin and enamelin in small
mineralised foci are found in the tumor cells and intercalated
droplets. Since all variants show identical benign biological behaviour and almost
all are encapsulated, conservative surgical enucleation or curettage is the
treatment of choice. Recurrence has been reported in a very few cases but
follow up is mandatory.

CONCLUSION

Here a rare case report of 80 year male patient with adenomatoid
odontogenic tumor of anterior mandible has been reported, which
otherwise occurs more commonly in younger female patients and in
maxilla. According to Giansanti et al. after local curettage of the tumour a
number of cases were followed up for periods ranging from one to ten
years with no reported cases of recurrence. Indeed, Giansanti et al.
reported that the adenomatoid odontogenic tumour was a completely
benign tumour which never occurred once removed. In the one year
follow-up in the present case no recurrence was reported.

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Fig. 1 : Pre Operative Photograph  
Fig. 2 : Photograph showing swelling of neck on right side

Fig. 3 : Intra oral view  
Fig. 4 : Mandibular True occlusal view

Fig. 5 : Intra Oral Peri-apical view  
Fig. 6: Preoperative orthopantogram

Fig 7 : Fine Needle Aspiration Cytology  
Fig 8 : Histopathology