ADENOMATOID ODONTOGENIC TUMOR IN PREGNANCY - A CASE REPORT

Girish V Chour*  
Associate Professor  Department Of Oral And Maxillofacial Surgery PMNM Dental College And Hospital Bagalkot - 587101 *Corresponding Author

Harini J S  
Postgraduate Student Department Of Oral And Maxillofacial Surgery PMNM Dental College And Hospital Bagalkot - 587101

Rashmi G Chour  
Associate Professor Department Of Pedodontics PMNM Dental College And Hospital Bagalkot - 587101

ABSTRACT
Adenomatoid Odontogenic Tumor (AOT) is a distinct odontogenic neoplasm which is sometimes considered as a hamartomatous proliferation of odontogenic tissue but currently regarded as a true neoplasm. Topographically AOT occurs in many variants but all show identical histological features. This article is a case report of a maxillary swelling in a pregnant female who was in her 2nd trimester. The swelling was pea size which grew rapidly during the pregnancy period and post-partum the patient came to the OPD with the swelling with the present size of 5cm X 5cm. Surgical enucleation was done of the same under general anaesthesia and on subsequent follow ups the gross facial asymmetry also reduced. Histologically it was suggestive of “Follicular Adenomatoid Odontogenic Tumor”. The Female preponderance in AOT is significant and these lesions grow rapidly during pregnancy indicative of oestrogen receptor expression but cannot be affirmative to rule out as the sole cause of the growth. Further research is appreciated to find the correlation between benign odontogenic tumors and pregnancy.

KEYWORDS
Adenomatoid Odontogenic Tumor, Odontogenic Tumor, Maxillary Swelling, Benign Tumor.

INTRODUCTION
Adenomatoid odontogenic tumor (AOT) is a distinct odontogenic neoplasm that was first recognised by Stafne in 1948. It was initially thought to be a variant of ameloblastoma and was therefore referred to as “ameloblastic adenomatoid tumor” or “adenoameloblastoma.”

In 1969, Philipsen and Birn suggested the term AOT, which is generally accepted today. Although some consider the lesion to be a hamartomatous proliferation of odontogenic tissue, it is currently generally regarded as a true neoplasm.

Topographically, the AOT occurs in peripheral and central variants, the latter further in follicular (with embedded tooth) and extra-follicular (no embedded tooth) types. The AOT is slow growing with few or no symptoms.

Tumour growth may cause displacement of teeth rather than root resorption. The follicular AOT mimics a follicular cyst, the extra-follicular, a residual or "globulo-maxillary" cyst and the peripheral a gingival fibroma. All variants of AOT show identical histologic features.

HISTOPATHOLOGY
Macroscopically the 5cm X 4cm specimen was well circumscribed,

A CASE REPORT
A 22 year old female reported to department OPD with a chief complaint of swelling in her left mid-face region since her 5th month of pregnancy. The swelling was initially the size of a pea-pod in the labial vestibule during her 5th month of gestation and grew up to a size measuring 5cm x 5cm 2 months postpartum. The new lactating mother gives a history of asymptomatic painless growth over the period of time and obstruction of left nostril since about 3 months. She does not give any history of paraesthesia or pus or bloody discharge, no change in growth pattern. On clinical examination, there was a solitary swelling in her upper left side of the jaw which extended from midline to the left buccal frenum region with blanching of gingiva over the swelling.

Enucleation of the entire mass was done in toto under general anaesthesia. The lesion had no adhesions to surrounding hard tissue and appeared to be a firm to hard, round to oval mass with impacted canine situated on the superior aspect of the lesion. Post operative recovery was uneventful. On regular subsequent follow ups the extra oral gross asymmetry had reduced and the palatal expansion had significantly reduced.

HISTOPATHOLOGY
Macroscopically the 5cm X 4cm specimen was well circumscribed,
Microscopically the H & E stained sections showed a well capsulated odontogenic lesion with odontogenic epithelial cells having reticulated nuclei arranged in various patterns like whirls, solid nodule, strand like, duct like and plexiform patterns in the periphery. There was abundance of round to irregular areas of calcifications distributed throughout the lesion.

The overall features were suggestive of “Follicular Adenomatoid Odontogenic Tumor (FAOT).

DISCUSSION
It has been estimated that the AOT accounts for between 2.2 and 7.1% of all odontogenic tumours which gives this tumour a ranking of fourth or fifth among the odontogenic tumours only surpassed by odontomas, myxomas, ameloblastomas and cemento-osseous tumours or lesions.

Age distribution with a very tall peak in the second decade makes the AOT unique among odontogenic tumours. The female: male ratio for all age groups and AOT variants together and globally is 1:9:1

The AOT appears in three clinico-topographic variants: (1) follicular; (2) extrafollicular; and (3) peripheral types.

The follicular and extrafollicular variants are both intra bony or central tumours and account for approximately 96% of all AOTs of which 71% are of the follicular type. The follicular and extrafollicular variants are both intra bony or central tumours and account for approximately 96% of all AOTs of which 71% are of the follicular type.

The two central variants together are more commonly found in the maxilla than in the mandible with a total ratio of 2:1:1. The rare peripheral type occurs almost exclusively in the anterior upper jaw with this location accounting for 88%. The two central variants together are more commonly found in the maxilla than in the mandible with a total ratio of 2:1:1. The rare peripheral type occurs almost exclusively in the anterior upper jaw with this location accounting for 88%.

Studies from the literature suggest the expression of Bcl-2 protein was detected in the epithelial tumors of odontogenic origin suggestive for apoptosis regulation. Other immuno histochemistry markers for tumor of odontogenic origin can be confirmed by PCNA Labelling and MIB-1-LI for further evaluation and prognosis.

Female preponderance in AOT is significant and these lesions grow rapidly during pregnancy indicative of oestrogen receptor expression but cannot be affirmative to rule out as the sole cause of the growth.

All variants of AOT show an identical, benign biological behaviour and almost all cases are well encapsulated, conservative surgical enucleation or curettage has proven to be the treatment modality of choice.

CONCLUSION
Adenomatoid odontogenic tumor being a benign lesion can show aggressive/massive proliferative growth as the blood is rich in growth factors and hormones.

Further research is appreciated to find the correlation between benign odontogenic tumors and pregnancy.

REFERENCES
4. Yasuhisa shinozaki, yoshinori Jinbu, Mikio kusama, shinji sakurai; A case report of adenomatoid odontogenic tumour arising in a pregnant woman: oral med pathol 9(2004); 31-35.