

# Follicular Adenomatoid Odontogenic Tumour: An Unusual Case in Mandible.

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## ABSTRACT

AOT is a benign (hamartomatous), noninvasive odontogenic tumour with slow but progressive growth. The purpose of this study was to report a follicular adenomatoid odontogenic tumor in the mandibular anterior region in a patient. A 17 year-old female reported with a swelling in the mandibular anterior region. On OPG a unilocular well defined radiolucency in the left mandibular parasymphysis region was seen extending from 32 to 35. The rarity of adenomatoid odontogenic tumor may be associated with its slowly growing pattern and symptomless behavior. Therefore, it should be distinguished from more common lesions of odontogenic origin in routine dental examinations.

**Keywords:** Benign, Follicular, Mandible, Odontogenic, Tumor.

## INTRODUCTION

Adenomatoid odontogenic tumor (AOT) is an uncommon, benign epithelial lesion of odontogenic origin, representing approximately 3% of all odontogenic tumors and is hypothesized to develop from the enamel organ, dental lamina, reduced enamel epithelium, or their remnants.<sup>[1-4]</sup> Described for the first time by Dreiblat in 1907 as an adenameloblastoma, and among others has also been named ameloblastic adenomatoid tumor. In 1969 Philipsen and Birn proposed the term AOT, indicating that it did not constitute a variety of ameloblastoma, and was accepted as such in the first WHO classification of odontogenic tumors established in 1971. The term AOT is without doubt the most appropriate, in that these tumors are clearly benign and, in contrast to the ameloblastoma, present a very low recurrence, making it unnecessary to carry out extensive and aggressive surgery; a simple curettage in conjunction with the extirpation of the associated

2:1, and appears most often in the second decade of life. AOT is over two times more located in maxilla than in the mandible and anterior jaw is much more affected than the posterior jaw. According to Philipsen and Reichart the AOT appears in three clinicopathologic variants: follicular, extrafollicular and peripheral. The follicular and extrafollicular variants are both intrabony, and account for approximately 96% of all AOT's of which 71% are of follicular type.<sup>[7]</sup> The follicular type is associated with an unerupted tooth whereas extrafollicular type has no relation with an impacted tooth and the peripheral variant is attached to the gingival structures.<sup>[8]</sup>

## CASE REPORT

A 17 years girl reported with the chief complaint of a swelling in lower front region of mouth since 6 months. The swelling was spontaneous in origin and increased in size gradually and attained the present size. There was mild pain which was intermittent in nature. Extraorally facial asymmetry was seen with enlargement of the left mandibular parasymphyseal region. Intraoral examination revealed a firm, nonfluctuant swelling extending from left central incisor to left first premolar region with obliteration of buccal vestibule and a missing canine. There was displacement of teeth with respect to 32, 34 and 35. The swelling was of the

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tooth being the indicated treatment.<sup>[4-6]</sup> The tumor occurs more frequently in females with a ratio of

same color as the surrounding mucosa and not associated with any other secondary changes.

O.P.G - There was a single well defined radiolucency in the left mandibular parasymphysis region of 32 to 35. The size of the radiolucency was 3.5 cm x 3 cm. It was oval in shape and had well corticated border. No root resorption was seen but radiolucency was associated with impacted canine.

Histopathology findings - H & E stained slide showed the presence of odontogenic epithelium with underlying connective tissue capsule. The epithelial cells were round to oval in shape which varied in their pattern from whorls and swirls to cells of a definite columnar variety resembling ameloblasts arranged in duct like pattern. The lumina of the duct like structures had basement membrane like eosinophilic material. In the midst of epithelial cells arranged in swirls are the areas of eosinophilic material. Foci of calcification were also seen in some areas. The underlying connective tissue shows stroma with plump fibroblasts, endothelial cell lined blood vessels, sparse and mild inflammatory infiltrate predominantly lymphocytes.



Figure 1:



Figure 2:



Figure 3:

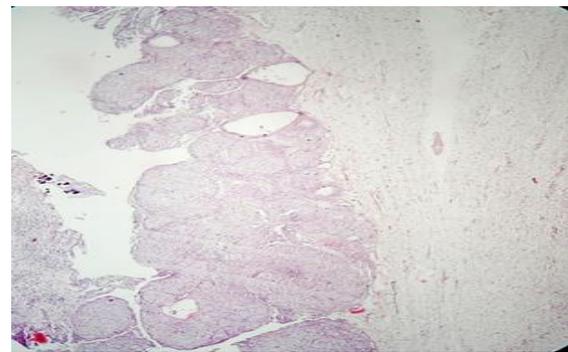


Figure 4:

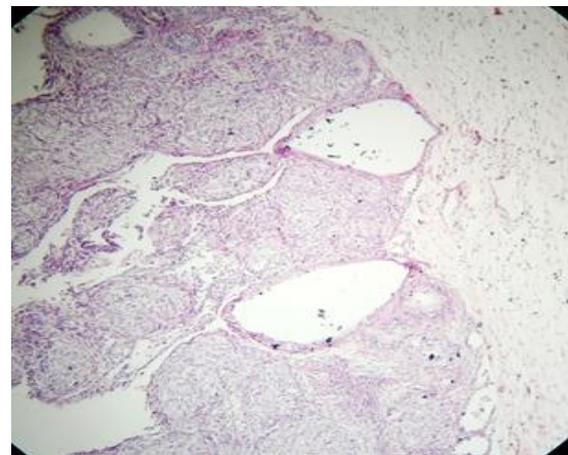


Figure 5:

## DISCUSSION & CONCLUSION

Adenomatoid odontogenic tumor is a slow growing lesion, constituting only 3% of all odontogenic tumours with a predilection for anterior maxilla (ratio 2:1) relative to mandible and is usually associated with impacted canine, of young females in the second decade of life.<sup>[7]</sup> In our case the lesion occurred in the anterior mandible which is unusual and no associated impacted tooth was seen. The sex and the age of the patient we described in this report was consistent with the literature. The origin of the AOT is controversial.<sup>[9,10]</sup> Because of its predilection for tooth-bearing bone, it is thought to

arise from odontogenic epithelium.<sup>[11]</sup> The tumor has three clinicopathologic variants, namely intraosseous follicular, intraosseous extrafollicular, and peripheral. The follicular type (in 73% of all AOT cases) is associated with an unerupted tooth whereas extrafollicular type (24%) has no relation with an impacted tooth<sup>8</sup> as in the case we presented here, and the peripheral variant (3%) is attached to the gingival structures. Follicular and extrafollicular types are over two times more located in the maxilla than in the mandible,<sup>[12]</sup> and most of the tumors involve anterior aspect of the jaws.<sup>[13,14]</sup> In our case, the tumor was a follicular intraosseous type, and also found in the anterior region but in the mandible.

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