Adenomatoid Odontogenic Tumor: A Dentigerous Cyst Mimic in Maxilla

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Local examination revealed a diffuse swelling involving the left infraorbital and malar areas extending up to the left nasolabial fold, mid-zygomatic arch, and infraorbital margin. Computed tomography scan findings showed an expansile radiolucent lesion with a well-defined radiosclerotic margin enwrapping a tooth within it.

A provisional clinical diagnosis of the dentigerous cyst was offered.

Enucleation was done and the specimen submitted for histopathological examination.

Microscopy

A benign epithelial tumor with a round to oval tumor cells arranged in nodules, whorls, and ductular patterns was seen. The tumor cells showed scant cytoplasm and uniform nuclei with bland chromatin. The epithelial nodules were surrounded by polyhedral to spindle-shaped cells (Figure 3). Intervening areas of homogenous hyaline material and calcified deposits were seen (Figure 4).

Abstract

The adenomatoid odontogenic tumor is a rare and distinct neoplasm which is considered a slowly progressive, benign, non-neoplastic hamartomatous lesion by many. It is notoriously misdiagnosed as a dentigerous cyst. It accounts for 1-9% of odontogenic tumors. The most common site of occurrence is maxilla and it is usually associated with an unerupted, permanent tooth. It is most commonly seen in young women patients. It closely resembles ameloblastoma or dentigerous cyst. A rare case of adenomatoid tumor of maxilla mimicking a dentigerous cyst is presented here.

Key words: Adenomatoid odontogenic tumor, Dentigerous cyst, Odontogenic cyst

INTRODUCTION

The adenomatoid odontogenic tumor is a relatively uncommon tumor of odontogenic epithelium comprised of duct-like structures. It may be partly cystic and partly solid in consistency. It has been called by various names after being described for the 1st time by steensland.¹

Drebaldt called it pseudo adenoameloblastome,² Harbizt “cystic adamantinoma”³ and Ghosh “ adamantinoma.”⁴ It was recognized as a distinctive entity by Stafne.⁵ It was eventually recognized that it is not a type of ameloblastome.⁶ Gorlin called it ameloblastic adenomatoid tumor while Abrams et al., suggested the name ameloblastic adenomatoid tumor⁷ and adopted this term in the WHO histological typing of tumor.

Clinical Summary

A 17-year-old male patient presented with progressive swelling on the left side of the face which was present since 6 months.

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Final Diagnosis
Adenomatoid Odontogenic Tumor.

DISCUSSION

The adenomatoid odontogenic tumor is an uncommon neoplasm. Three variants of the tumor have been described namely, intraosseous follicular, intraosseous extrafollicular and peripheral types. The extrafollicular type shows no relation with an impacted tooth which is seen in about 24% of cases as in the present case. The majority of the tumors (73%) are of a follicular type and are seen in association with an unerupted tooth. The peripheral variant (3%) is seen attached to the gingival structures. The intraosseous follicular and extrafollicular types are commoner in the maxilla than in the mandible. The tumor is a more common seen in females with a female to male ratio of 2:1. The histogenesis of this tumor is debatable. It is suspected to arise from odontogenic epithelium because it arises more commonly in the teeth bearing bones. The tumors are usually small ranging from 1.5 to 3 cm. Larger tumors as in the present case have also been reported. Sometimes extensive calcification can be seen in the tumor. The clinico-radiologic appearances are often mistaken for calcifying odontogenic tumor or dentigerous cyst as in the present case. The differential diagnoses include ameloblastoma, ameloblastic fibro-odontoma, and ameloblastic fibroma.

Since the tumor is well-encapsulated and is known to have a benign behavior, conservative surgical enucleation is the preferred treatment of choice. It has an excellent outcome without any recurrence. Our patient who underwent surgical enucleation 6 months ago is asymptomatic on follow-up.
CONCLUSION

The adenomatoid odontogenic tumor is an uncommon entity which is often clinically mistaken for the dentigerous or odontogenic cyst. Histopathology is the gold standard in its diagnosis. Conservative surgical treatment is curative.

REFERENCES