Follicular Adenomatoid Odontogenic Tumor

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ABSTRACT

Adenomatoid odontogenic tumor is an uncommon odontogenic lesion, composed of odontogenic epithelium, characterized histologically by duct-like structures with amyloid-like deposits, noninvasive lesion with slow but progressive growth. Here we are reporting a case of adenomatoid odontogenic tumor in a 16-year-old female patient in the maxillary region. This paper provides the controversies regarding its origin and management in light of recent findings, clinical, radiographic, histopathologic and therapeutic features of the adenomatoid odontogenic tumor.

Keywords: Adenomatoid odontogenic tumor, dentigerous cyst, impacted teeth

CASE REPORT

A 16-year-old female patient reported with a chief complaint of unerupted tooth and pain in the upper anterior left maxillary region. The medical history was insignificant. Intraoral examination disclosed a nontender, expansible lesion of the left maxilla, surrounded by normal mucosa and retained deciduous canine and missing left permanent canine (Fig. 1). Orthopantomogram (OPG) and maxillary occlusal view revealed the presence of a significant unilocular radiolucent area with well-defined sclerotic borders, involving an impacted upper left permanent canine (Figs. 2 and 3). According to the clinical and radiological findings, the lesion was diagnosed as an adenomatoid odontogenic tumor.

Figure 1. Intraoral picture showing asymmetry on the left maxillary region and missing left permanent canine, retained deciduous canine and malpositioned left lateral incisor.
odontogenic tumor. Under local anesthesia, excisional biopsy was performed with excavation of upper left canine (Fig. 4).

The differential diagnosis was dentigerous cyst, calcified epithelial odontogenic tumor and odontogenic keratocyst.

**Histopathological Features**

Odontogenic epithelium is arranged in the form of sheets, rods and few odontogenic cells, arranged in duct like structures with eosinophilic material in the center. A well-defined firm thick fibrous tissue capsule is seen at the periphery, which confirms the diagnosis of adenomatoid odontogenic tumor.

**DISCUSSION**

Adenomatoid odontogenic tumor is a slow growing lesion, constituting only 3% of all odontogenic tumors with a predilection for the anterior maxilla (ratio 2:1)⁴ Rick et al have reported adenomatoid odontogenic tumor to occur with many types of cysts and neoplasm’s including dentigerous cyst, calcifying odontogenic cyst, odontoma and ameloblastoma, etc.⁵ In relation with a dentigerous cyst the adenomatoid odontogenic tumor may demonstrate, grossly and microscopically, one or more associated cystic cavities. Some of these cysts are lined by nonkeratinized stratified squamous epithelium, which is similar to the lining of the dentigerous cyst or lined by less structured membrane that may demonstrate bud like extensions into the connective tissue. In our case, a moderate amount of the inflammatory component was evident in the sections, which could cause the cystic epithelium to lose its characteristic features and hence restrict the typing to an odontogenic cyst alone.

Odontogenesis is a complex process wherein neoplastic or hamartomatous lesions can occur at any stage of odontogenesis. The secondary development of an ameloblastic proliferation, whether hyperplastic or neoplastic is well-known, but remains controversial. In the present case, the multifocal cellular proliferation had the structure of an AOT although larger lesions reported in the literature are usually in the dimensions of 2-3 cm. Radiographically they usually appear as unilocular lesion, may contain fine calcifications with or without root resorption.⁶,⁷ This appearance must be differentiated from various types of disease, such as calcifying odontogenic tumor or cysts. The differential diagnosis can also be made with ameloblastoma, ameloblastic fibroma and ameloblastic fibro-odontoma. The tumor is well-encapsulated and shows an identical
benign behavior. Therefore, conservative surgical enucleation produces excellent outcome without recurrence.8,9 Our patient has been under follow-up for eight months.

CONCLUSION

Our case report supports the general description of adenomatoid odontogenic tumor in the previous studies. We conclude that 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.

REFERENCES


BPA Leaching into Urine, Saliva from Dental Composites?

Bisphenol A (BPA), a potentially toxic compound, gets into patients’ saliva and urine when composite resin restorations are placed on their teeth, a new study shows. (Source: Medscape)

Soft Drinks can Cause Tooth Decay

Consumption of sugary beverages, particularly soft drinks and sports drinks, could be hard on your teeth and cause dental decay, researchers say

“Tooth decay carries with it significant physical, social and health implications, and we believe the risk of tooth decay should be included in any warnings relating to sweet drinks,” the American Journal of Public Health, quoting Armfield, reported.

“Essentially, we need to ensure that children are exposed less to sweet drinks and have greater access to fluoridated water, which will result in significantly improved dental outcomes for children,” adds Armfield.

Gingivitis Makes Immune System Shut Down Processes that could Destroy It

Researchers have identified how the bacterium Porphyromonas gingivalis, which causes gum disease, manages to manipulate the body’s immune system to shut down the normal process which could destroy it, a new study published in the Journal of Leukocyte Biology reveals.

Specifically, the report shows that this pathogen prompts the production of the anti-inflammatory molecule Interleukin-10 (IL-10). This, in turn, inhibits the function of T-cells, which would otherwise help to protect the host from this particular microbial infection.