

Dentigerous Cyst

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Abstract

Dentigerous cysts, also called follicular cysts, are slow-growing benign and non-inflammatory odontogenic cysts that are thought to be developmental in origin. On imaging, they usually present as a well-defined and unilocular radiolucency surrounding the crown of an unerupted or impacted tooth within the mandible. Over 75% of all cases are located in the mandible.

Keywords: Dentigerous cyst, impacted supernumerary teeth, mesiodens.

INTRODUCTION

Dentigerous cysts are the second most common odontogenic cysts after those related to the roots of the teeth. They usually present in the 2nd to 4th decades of life and are uncommonly seen in childhood because they almost exclusively occur in secondary dentition. It is an odontogenic cyst formed by the accumulation of fluid between reduced enamel epithelium and enamel surface. It surrounds the crown of an impacted tooth and is attached to its neck. The crown of the involved tooth projects into the cyst lumen. It is estimated that 10% of impacted teeth are associated with dentigerous cysts. Dentigerous cysts may also be seen associated with supernumerary teeth and odontomas¹.

CASE REPORT

A 35 years old male patient named Ajith K Sukumaran reported with a chief complaint of pain and food lodgement of left lower back tooth region since 1 year. Patient also has pain radiating to left ear. Patient is under medication for dislipidemia. On general examination, patient is moderately built and nourished with a normal gait. On radiographic examination, an IOPA of size 2 showing mandibular left posterior region showing 36 37 & 38 completely. IOPA of 38 shows coronally well define dunilocular radioluceny of approximate size of 1 x 1 cm with sclerotic border along with normal crown structure and mild interdental bone loss suggestive of dentigerous cyst.

DISCUSSION

It occurs frequently in association with impacted mandibular, maxillary third molars, and maxillary canines. Dentigerous cyst is commonly seen in the 2nd and 3rd decades of life. Males are relatively more predisposed. It grows aggressively and produces facial asymmetry, bony expansion, displacement and resorption of teeth, in the region of cyst tooth may remain unerupted¹. May result in hollowing out of entire ramus extending up to

coronoid process and condyle as well as in expansion of the cortical plate due to the pressure exerted by the lesion. Associated with this reaction may be displacement of the third molar to such an extent that it sometimes come to lie compressed against the inferior border of the mandible. In case of maxillary canine, anterior maxilla is expanded. There will be no pain unless secondarily infected. On aspiration, yellow-colored fluid is obtained².

Radio graphically, well defined unilocular radiolucency associated with the crown of unerupted teeth, well defined sclerotic margins and occasionally trabeculae seen, there will be root resorption of adjacent tooth and tooth displacement. Dentigerous cysts exhibit three different presentations, namely, the central, lateral and circumferential types. In central variety, the cyst symmetrically envelops crown. The cyst occurs on lateral aspect of the crown in lateral variety and envelops crown entirely in circumferential variety. Dentigerous cyst may appear as well defined unilocular or multilocular radiolucency. Occasionally these cysts may cause displacement and resorption of the adjacent teeth. Large cysts often cause expansion of the cortical plates³.

Histologic features

It has no characteristic microscopic features. It has cyst lining and connective tissue wall. The connective tissue wall consists of very loose fibrous connective tissue and sparse collagenized myxomatous tissues. It has presence of odontogenic epithelium. The inflammation leads to presence of Rushton bodies of hematogenous origin in the lining epithelium. Cholesterol clefts might be present⁴.

POTENTIAL COMPLICATIONS

The odontogenic cyst has following complications:

The development of mural ameloblastoma, squamous cell carcinoma and mucoepidermoid carcinoma.

Syndrome association

Multiple cysts can be formed in association with GorlinGoltz syndrome, cleidocranial dysplasia and MaroteauxLamy syndrome³.

MANAGEMENT

Treatment of dentigerous cyst include enucleation or marsupialization.

Enucleation is the modality of treatment that includes complete removal of the cystic lining and extraction of the impacted tooth. This type treatment is indicated when the cyst surrounds a supernumerary tooth or if the cyst associated tooth is not expected to erupted either spontaneously or by extrusion².

Marsupialization is a conservative surgical intervention that decreases the size of the cyst gradually. The procedure involve making a window on the cystic wall by incision, evacuation of the contents of the cyst, and suturing the cystic lining to the oral mucosa. It has advantages in promoting eruption of the cyst associated tooth with or without orthodontic traction on the other hand, the disadvantages of marsupialization include the long duration of treatment and leaving the larger part of the cystic lining in situ¹.

CONCLUSION

A dentigerous cyst or follicular cyst is an odontogenic cyst - thought to be of developmental origin - associated with the crown of an unerupted (or partially erupted) tooth. The cyst cavity is lined by epithelial cells derived from the reduced enamel epithelium of the tooth forming organ. Regarding its pathogenesis, it has been suggested that the pressure exerted by an erupting tooth on the follicle may obstruct venous flow inducing accumulation of exudate between the reduced enamel epithelium and the tooth crown.

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