DENTIGEROUS CYST OF BILATERAL MAXILLARY CANINES IN A YOUNG CHILD

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ABSTRACT

Dentigerous cysts are the most common odontogenic and developmental cysts which mostly surround the crown of unerupted teeth, odontomas, or super numerary teeth. Their bilateral presentation is rare. Non syndromic bilateral cysts show a predilection for the mandibular first molar area. We present an unusual case of 9 year old girl presenting with swelling in the right cheek, followed by a similar swelling in left cheek after 4 months. Both of the mass were proved to be dentigerous cyst associated with maxillary canines by histopathological study.

Key words: bilateral dentigerous cyst; maxillary canines; non syndromic.

INTRODUCTION

A dentigerous or follicular cyst is formed from the accumulation of fluid between the reduced enamel epithelium and the completely formed tooth crown or in the layers of the reduced enamel epithelium. The crown projects into the cystic space. The tooth remains unerupted because of the overlying cyst. A dentigerous cyst usually occurs in the permanent dentition, most common in association with impacted mandibular third molars, then maxillary third molars and with a few impacted maxillary canines. Radiographically, the well-defined radiolucency has a radiopaque border and surrounds the crown of an impacted or unerupted tooth. The dentigerous cyst is found in children and adolescents; the highest incidence is in the second and third decades. Dentigerous cysts are solitary. Bilateral or multiple cysts are usually associated with developmental syndromes, such as mucopolysaccharidosis, basal cell nevus syndrome, and cleidocranial dysplasia. The occurrence of bilateral dentigerous cysts in the absence of a developmental syndrome is rare, but their bilateral occurrence in relation to maxillary canines is very rare as in this case in absence of any syndrome.

CASE REPORT

A 9-year-old girl reported to the Department of otorhinolaryngology at our institute with the chief complaint of a painless swelling in the right upper jaw since 5 months. On general physical examination, the patient was apparently healthy. The medical history was not significant and routine haematological investigations were within normal limits. A clinical intraoral examination revealed a diffuse swelling in right maxillary vestibule extending from right lateral incisor to first molar. The swelling was ill defined, hard in consistency, non-tender, and measured about 2.5 × 2.5 cm. The overlying mucosa was apparently normal with no signs of inflammation or serosanguinous discharge. It was not compressible and no pulsations were felt.

Patient underwent CT scan (figure 2), a

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provisional diagnosis of dentigerous cyst was made based on clinical and radiological findings. As patient’s parents were not willing for prolonged treatment, enucleation was done. The treatment consisted of extraction of the maxillary right permanent canine, along with en masse removal of the dentigerous cyst. The surgery was done under general anaesthesia using the Caldwell–Luc approach. HP study confirmed it to be dentigerous cyst.

4 months later Patient presented to OPD with a similar swelling on left maxillary canine fossa (figure 1). Patient underwent enucleation; the cyst wall along with its impacted canine was removed. The impacted canine was found to be higher up in the maxillary sinus. Histopathological report proved it to be dentigerous cyst.

DISCUSSION

A dentigerous cyst is an epithelial-lined developmental cavity that encloses the crown of an unerupted tooth at the cement enamel junction\(^4\). Dentigerous cyst occur more frequently in males (1.57:1)\(^5\). The present case was of an 9 year old female child. Dentigerous cyst are usually asymptomatic and occurs mostly in the 2\(^{nd}\) decade and 3\(^{rd}\) decade of life\(^6\). It can become extremely large and cause cortical expansion and erosion, they can cause pain when they get infected.

In an infected cyst the borders may be ill-defined. There may be difficulty in distinguishing a small cyst from a normal tooth follicle. It has been suggested that any follicular space of > 5 mm should be suspected to be a dentigerous cyst\(^7,8\). Histologically, a normal dental follicle is lined by enamel epithelium, whereas a dentigerous cyst is lined by non-keratinized stratified squamous epithelium. Since the dentigerous cyst develops from follicular epithelium it has more potential for growth, differentiation and degeneration than a radicular cyst. Occasionally the wall of a dentigerous
A dentigerous cyst may give rise to a more ominous mucoepidermoid carcinoma. Due to the tendency for dentigerous cysts to expand rapidly, they may cause pathological fractures of jaw bones.

The dentigerous cyst is the most frequent developmental odontogenic cyst affecting permanent teeth. Dentigerous cysts of maxilla are usually associated with the maxillary third molar and not with a canine tooth. In the present case, the ectopic tooth was a permanent canine. There have been previous case reports of a dentigerous cyst with a deciduous tooth and with a supernumerary tooth. A case of a large maxillary cyst involving the whole sinus and producing epiphora has been reported by Atlas et al.

Treatment of a dentigerous cyst depends on size, location, and disfigurement and often requires variable bone removal to ensure a total removal of the cyst. Even though marsupialisation of the cyst is the treatment of choice for dentigerous cyst in children in order to give a chance to the unerupted tooth to erupt, the major disadvantage of marsupialisation is that pathologic tissue is left in situ, without a thorough histologic examination. Although the tissue taken from the window created can be submitted for pathologic examination, there is a possibility of a more aggressive lesion in the residual tissue. But, in this case, as the tooth was almost displaced up to the roof of the developing maxillary sinus far from the alveolar arch with a questionable viability, enucleation with the removal of the displaced tooth was favoured.

CONCLUSION

Dentigerous cyst is the most common developmental cyst occurring in permanent dentition in an adult, most commonly affecting third molars of mandible. Dentigerous cysts of maxilla are usually associated with the maxillary third molar and not with a canine tooth. In the present case, the cyst was associated with right canine followed by left canine, These findings are not common in dentigerous cysts, and hence, this case is reported.

REFERENCES

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