A DENTIGEROUS CYST CONTAINING AN ECTOPIC CANINE TOOTH IN MAXILLARY SINUS ROOF: A CASE REPORT

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ABSTRACT: Ectopic eruption in to dental component is common, whereas eruption into other site is rare. anatomical areas such as palate, maxillary sinuses and nasal cavity can infrequently be the site of ectopic tooth eruption. one of the non dental sites for ectopic eruption is the maxillary sinus. Here, we present a case of dentigerous cyst with an ectopic maxillary canine located in maxillary sinus roof below the floor of the orbit in a 8-years-old boy.

KEYWORDS: Ectopic Eruption, Dentigerous Cyst, Maxillary sinus

INTRODUCTION

Ectopic teeth are those located in the jaw bones are regions other than the alveolar arch. Ectopic placement of tooth bud occurs due to genetic and environmental relationship factors which cause a budding tooth to congenitally migrate in the initial stages of embryogenesis, or is the result of a change in the displacement of teeth owing to local factors. Local factors includes volumetric incompatibility between the tooth and the dental arch, prolonged retention of primary teeth, presence of clefts, ankylosis and a cystic or neoplastic lesion or trauma. the dentigerous cyst caused by by local factors is associated with the crown of a permanent tooth, and is the most common developmental odontogenic cyst. It may arise from between the enamel epithelium and the tooth or from remnants of odontogenic epithelium. Environmental factors include endocrine insufficiency and febrile diseases or irradiation. Ectopic teeth are common in the mandible Incisors, canines and premolars are the most affected teeth. Ectopic teeth can occur in both deciduous and permanent dentition. Most cases do not have symptoms and in general, are discovered during routine radiographic examination. A symptomatic tooth can be removed surgically or monitored radiographically at regular intervals.
Case report

A 8-year-old boy attended our hospital with the chief complaint of swelling left maxilla (Fig.1 and Fig.2). He had no systemic illness. Intraoral examination revealed deciduous maxillary teeth, permanent first molars. In panoramic radiograph, a radiolucent image of the cyst enclosing an ectopic maxillary canine tooth with an incompletely formed root was discovered in the left maxillary sinus roof below the orbital floor (Fig.3 and Fig.4).

Caldwell-Luc operation was performed under general anesthesia on the left side. The cyst was easily dissected together with the ectopic tooth from the orbital floor (Fig.5 and Fig.6). After histopathological examination the cyst was diagnosed as a dentigerous cyst.

The post operative period of the patient was uneventful.

Discussion

Ectopic teeth are seen in different regions of the jaw bones such as mandibular condyle, coronoid process, palate, maxillary sinus and nasal cavity, places relatively far away from the arch. These teeth are rarely found within the sinus and are discovered on routine clinical or radiographic examination, as most cases are symptomatic.

Ectopic teeth in the sinus may cause obstruction in the canals of the sinus and chronic sinusitis. However in the present case the ectopic canine in maxillary sinus below the orbital floor. While ectopic molars and supernumerary teeth have been more commonly reported in the maxillary sinus, ectopic permanent canines were less frequently encountered.

Etiology of ectopic eruption is still not completely understood. But many theories have been suggested including trauma, infection, pathologic condition such as dentigerous cyst and developmental anomalies. The dentigerous cyst is the most frequent developmental odontogenic cyst affecting the permanent teeth. However dentigerous cyst of the maxillary sines are usually associated with maxillary 3rd molars and not with a canine tooth. Case reports of dentigerous cyst were associated with deciduous and supernumerary teeth. Baykal et al. reported that the possible etiological factor was dentigerous cyst. In the present case, the etiological factor was also a dentigerous cyst.

The differential diagnosis of dentigerous cyst includes ameloblastoma, odontogenic fibroma, odontogenic myxoma, the origins of which are inflammatory, other types of odontogenic developmental cysts of the jaw bones. Odontogenic developmental cysts arise from the dental organ. Follicular cyst arise in any region of the alveolus. If the follicular cyst develop once the tooth has started to form, the tooth or its crown may become part of the cyst wall and may penetrate into the cystic cavity. This type is referred to as dentigerous cyst.

Ectopic teeth in the maxillary sinus are easily diagnosed radiographically, because of their radio-opaque image. Waters view, panoramic radiography, plane skull radiography are used to diagnosed. The CT scan helps to exact location of the ectopic tooth and proper treatment planning.

The surgical treatment of an ectopic tooth in the maxillary sinus involves removal via a Caldwell-Luc procedure. In addition, we performed surgical enucleation with the Caldwell-Luc operation. Trans-nasal extradition of tooth maybe attempted if the tooth is small sited near the maxillary osmium. It is also mandatory to completely remove all diseased astral tissue and all resected soft tissue histologically.
CONCLUSION

In conclusion, we strongly suggest that computed tomography is useful, especially for the localization of ectopic teeth. Additionally, in routine clinical practice conventional radiographs may be preferred over CT, and may be helpful for diagnosis and treatment plans as they are simple and inexpensive.
References:


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