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Case Report

Dentigerous Cyst in Relation to Ectopic 3rd Molar in Left Maxillary Sinus: Case Report

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ABSTRACT:
It is seen rarely to encounter an ectopic tooth eruption in a non-dental area. Multiple cases of the teeth erupting in the chin, mandibular condyle, coronoid process, palate and maxillary sinus. Often, the ectopic tooth in maxillary sinus is incidentally found on routine radiological examination, while at the same time, they can be associated with pathologies like odontogenic keratocyst or dentigerous cyst. Moreover, swelling, facial pain, epistaxis , purulent rhinorrhoea, , headache and epiphora-related naso-lacrimal duct obstruction can also be seen. Most of the ectopic teeth within the maxillay sinus are remived by Caldwell-Luc procedure. In this study, a case of ectopic maxillary third molar tooth on left maxillary sinus is presented.
Key words: Dentigerous Cyst; Ectopic Tooth; Maxillary Sinus; Third Molar.

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INTRODUCTION:

An ectopic eruption of the tooth is a disturbance in which the tooth fails to erupt in its normal place. [1] In the oral cavity, mandibular third molar and maxillary canine are the most commonly involved teeth. The exact pathogenesis of the ectopic eruption of tooth is not clear and it can be attributed to genetic factors, odontogenic infections, cleft palate, trauma,, displacement or crowding due to cyst or tumors.[2] Mostly the cases of ectopic eruption of the tooth are asymptomatic and accidently encountered in the routine radiograph.[3]However, depending upon their position, sometimes they may present with the symptoms of facial pain, headache, epistaxis, swelling or purulent discharge. Dentigerous cyst associated with ectopically erupted maxillary third molar within the maxillary sinus is very rare. The pressure caused by the enlargement of cyst may displace the tooth to the ectopic site.[4] Till date only few cases of such type have been reported. The current case reported is an unusual and rare case of dentigerous cyst associated with an ectopic maxillary third molar in the left maxillary sinus.

CASE REPORT:

A 17year old male patient (Figure1) reported with the chief complaint of foul smelling discharge from left nostril since 6 months. He had consulted many physicians without any relief. History of present illness revealed that he was referred by ENT surgeon in order to rule out any dental cause. Past medical history and family history were non-significant. No history of adverse habits. Patient was moderately built. There was no apparent swelling or trismus on extra oral examination, prurulent discharge was evident from left nostril. On intraoral examination, there was no obvious swelling and all the third molars were erupted except 28. Orthopantomograph (OPG) revealed presence of tooth like structure within the left maxillary sinus just below the infraorbital margin (Figure 2). Hence in order to determine the exact location of the tooth since it was very close to orbital floor, patient was advised for CECT PNS (Figure 3) which revealed an expansile lesion of size 35.4 x 29.5 mm near the lateral wall of the left maxillary sinus with the presence of an impacted tooth, with thinning of the lateral wall of the sinus. Moreover straw colored fluid was aspirated (Figure 4). Routine blood investigations advised were chest x ray, ECG. Enucleation of the cyst with surgical removal of impacted tooth under general anaesthesia was done (Figure 5).The lesion was excised in-toto (Figure 6). The tissue was then sent for histopathological examination, which confirmed the diagnosis of the dentigerous cyst by revealing the features compatible with the diagnosis such as the cyst wall lined by stratified squamous epithelium lining with peripheral palisading of basal layer, sub-epithelial region shows granulation tissue and lymphoid aggregates are seen in the deeper part of the tissue(Figure 7). The patient was followed up and the surgical site was completely healed (Figure 8).

Figure 1: Profile of the patient

Figure 2: OPG showing ectopic location of maxillary left third molar

Figure 3: CECT PNS showing cystic lesion and its extent in left maxillary sinus

Figure 4: Showing aspirated straw colored fluid

Figure 5: Showing primary closure after enucleation

Figure 6: Showing excision of the lesion with extraction of 28

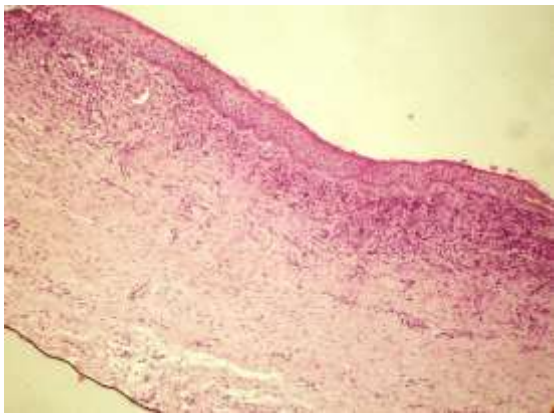

Figure 7: Showing histopathological picture of the lesion

Figure 8: Follow- up showing complete healing of the surgical site

DISCUSSION:

The word "dentigerous" literally means tooth bearing. Among all the, 5-6% are associated with supernumerary teeth and out of those 90% are associated with a maxillary mesiodens. [5]The pathogenesis observed is the accumulation of fluid between an unerupted tooth and surrounding reduced enamel epithelium. It is most commonly seen in males, occurring mostly in second or third decade of life. About 30% in the maxilla and 70% occur in the mandible. Most of the dentigerous cyst involve mandibular third molar, followed by maxillary permanent canine- mandibular premolars - maxillary third molars. Maxillary third molar is usually seen in third decade of life. [6]The occurrence of dentigerous cyst associated with an ectopically erupted tooth within the maxillary sinus is very rare. Most of the time, these cysts are painless and remain dormant, although it may cause some expansion of cortical bone. In case of infection, it shows symptoms such as facial swelling as well as sensory changes. On radiographic examination, it is seen as well-defined unilocular radiolucency with sclerotic border associated with the crown of an unerupted tooth. However, trabeculations may be seen

giving the impression of multilocularity. Simple, reliable and inexpensive radiographic modalities include OPG, water view, and lateral cephalogram. In case of dentigerous cyst involving the maxillary sinus, CT gives a better depiction of all the paranasal sinuses and involved structures. Rarely, squamous cell carcinoma, ameloblastoma or mucoepidermoid carcinoma can develop in dentigerous cysts. CT gives better bony detail and help in the measurement of size and the extent of cystic lesion [7]. Some studies have compared the efficacy of CT and plain film radiography (PFR) and showed that CT provides superior efficacy over PFR, mostly to determine the proximity of the tooth to the sinus wall as well as in prediction of prognosis. A study by Ustuner., *et al*. demonstrated the MRI findings of cystic lesion, which are as homogeneously hypointense on T1 weighted images and hyperintense on T2 weighted images. The impacted tooth will be seen as hypointense. The differential diagnosis of a dentigerous cyst includes AOT, Unicystic Ameloblastoma, Ameloblastic Fibroma, OKC, Ameloblastic Fibro-Odontoma and early stages of CEOT/Gorlin's Cyst. In about 25% to 40% of the Odontogenic keratocyst, unerupted tooth is involved.[8] Ameloblastic Fibro-Odontoma often occurs in 1st decade and mostly seen in maxillary sinus. Ameloblastic fibroma is another uncommon tumour in which75% of cases associated with the unerupted tooth and occurs in first two decades. CEOToccurs in the posterior mandible and often associated with an impacted third molar while AOT is relatively common and 75% cases are seen in anterior maxilla with impacted canine.[9]The treatment modality followed ideally is mainly enucleation of the cyst along with the removal of tooth.[10] However, for larger defects, in order to shrink the size of the cyst, marsupialisation is done initially which is followed by enucleation and extraction. Recurrence is commonly associated with marsupialization. Some newer modalities like endoscopic approach are reported with less surgical as well as postoperative consequences. Thereby, dentigerous cyst associated with ectopic teeth is a rare phenomenon and hence conventional and advanced radiographic techniques could be used for appropriate diagnosis and treatment planning.

CONCLUSION:

There should always be complete removal of the dentigerous cyst as they have the tendency to progress into more aggressive lesions because of the potency of the cells in cell wall lining. Hence, this also overstresses the importance of the ruling out any dental pathology when a patient presents with such symptoms. In the present case the dentigerous cyst associated with ectopic maxillary third molar was successfully treated with a surgical treatment with uneventful healing.

REFERENCES

1. Beriat GK, Beriat NC, Yalçınkaya E. Ectopic molar tooth in the maxillary sinus: A case report. Clin Dent Res 2011;35:35-40.
2. Smith JL II, Kellman RM. Dentigerous cysts presenting as head and neck infections. Otolaryngol Head Neck Surg.2005;133:715-7.
3. Tournas AS, Tevfik MA, Chauvin PJ, Manoukian JJ. Multiple unilateral maxillary dentigerous cysts in a non syndromic patient: A case report and review of the literature. Int J Pediatr Otorhinolaryngol 2006;1:100-6.
4. Jain NK, Vashistha S, Jain M. Dentigerous cyst with ectopic third molar tooth in maxillary sinus causing chronic rhinosinusitis. Clinical Rhinology: An International Journal 2013;6:106-7.
5. Dl Pasquale and P Shermetaro C. "Endoscopic removal of a dentigerous cyst producing unilateral maxillary sinus opacification on computed tomography". Ear, Nose, and Throat Journal. 2006; 85.11 : 747-748.
6. Kasat VO, Karjodkar FR, Laddha RS. Dentigerous cyst associated with an ectopic third molar in the maxillary sinus: A case report and review of literature. Contemp Clin Dent 2012; 3:373-6.
7. Smrithi Devi Veera and Gouramma Padanad. "Dentigerous cyst with recurrent maxillary sinusitis A case report with literature review". International Journal of Applied Dental Sciences. 2015; 1.4 : 16-19
8. Duhan R., *et al*. "Dentigerous Cyst in Maxillary Sinus Region: A Case Report and Outline of Clinical Management for Paediatric Dentists". IOSR Journal of Dental and Medical Sciences (IOSR-JDMS).2015;14.8: 84-88.
9. Yadavalli Guruprasad., *et al*. "Infected Dentigerous Cyst of Maxillary Sinus Arising from an Ectopic Third Molar". Journal of Clinical Imaging Science.2013; 3.1: 7.
10. Vikrant O Kasat., et al. "Dentigerous cyst associated with an ectopic third molar in the maxillary sinus: A case report and review of the literature". Contemporary Clinical Dentistry 2012; 3.3L: 373-376.