

Epistaxis, Nasal Obstruction and Unilateral Facial Pain Due to an Ectopic Tooth

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Ectopic eruption of teeth within the dentate region of the jaws is frequently noticed in routine clinical practice. However, the ectopic eruption in a non-dentate region is rare, especially in the area of the maxillary sinus. Early surgical intervention for the removal of ectopic teeth along with enucleation of associated cyst, such as a dentigerous cyst, if present, is the preferred treatment.

We report a case of a patient who was referred due to chronic mucopurulent discharge and epistaxis, nasal obstruction and unilateral facial pain due to an ectopic third molar. This condition was caused by an ectopic tooth near the sinus ostium; however, the patient had no dental complaints.

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Tooth eruption is the movement, growth and formation of dental tissue from its origin in the intra-alveolar bone to its final position in the oral cavity. During this movement, a variety of problems could occur. One of them is ectopic tooth eruption, which is the eruption of a tooth in an abnormal position; this mostly occurs intraorally. Another problem is intrabony impaction. This occurs when the tooth does not erupt and in some cases is surrounded by a cyst. The third molars are the most common teeth to be impacted; these are known as the wisdom teeth. These teeth erupt at the age of 17 to 21 years and if not, they pass unnoticed and are usually discovered on routine examination. Other common teeth to erupt out of position are supernumerary teeth.

Ectopic eruption of a third molar tooth within the dentate region of the jaw is frequently noticed in routine clinical practice. However, an ectopic eruption into a non-dentate region is rare, especially in the area of the maxillary sinus. The most common location for a supernumerary tooth to occur is in the anterior maxilla area in which the teeth are known as mesiodens. Common ectopic locations for a third molar to occur are in the posterior maxilla area and the posterior areas of the mandible, such as the ramus. The extra teeth may be irregularly shaped and positioned in which they may be vertical, horizontal or inverted. In cases where the teeth erupt in the maxillary sinus, they might be asymptomatic or cause a few signs and symptoms. Such symptoms are facial pain and headaches, obstruction of the nasal cavity and the nasolacrimal duct with bad-scented rhinorrhea, epistaxis and in some cases, external nasal deformities¹.

Ectopic eruption of teeth leading to severe infections in the maxillary sinus may present with symptoms, which might lead to a wrong diagnosis and treatment plan.

The aim of this presentation is to report a case of an ectopic third molar presented with chronic mucopurulent discharge and epistaxis, nasal obstruction and unilateral facial pain.

THE CASE

A twenty-seven-year-old male patient presented to ENT clinic with a chief complaint of left-sided unilateral facial pain, two-months history of epistaxis and left unilateral nasal obstruction. There was no extra oral clinical finding, neither facial asymmetry nor any abnormalities, such as sinus drainage from the buccal alveolar bone or any missing teeth except for the upper-left third molar.

CT revealed that there was an accumulation of fluid in the right maxillary sinus and little fluid in the ethmoidal sinus and the presence of a foreign body on the roof of the sinus ostium. The foreign body was approximately 20.5mm away from the left palatal root of the sixth/seventh molar, see figures 1 and 2. The patient underwent endoscopic sinus drainage under general anesthesia. The foreign body was removed with the polyp and the pus was drained. Upon observation, the object had similar morphology to that of a maxillary molar, see figure 3. Histology revealed that the foreign body had tooth-like tissue (enamel, dentin, pulp tissue) in the proper order from inside out. The patient was recalled for a follow-up a week later and was symptom-free.

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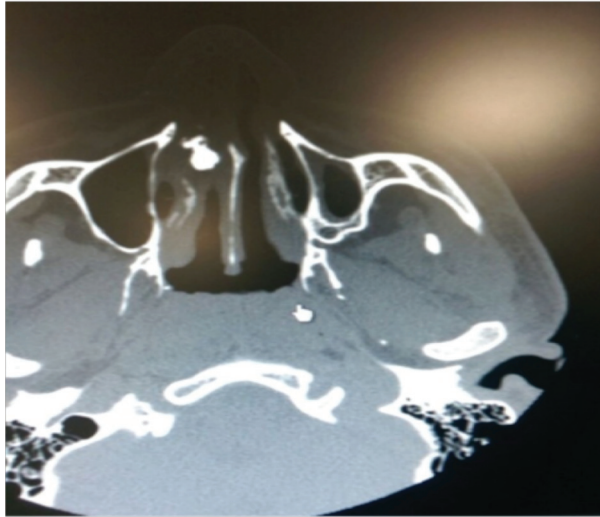


Figure 1: Ectopic Tooth in the Left Maxillary Sinus

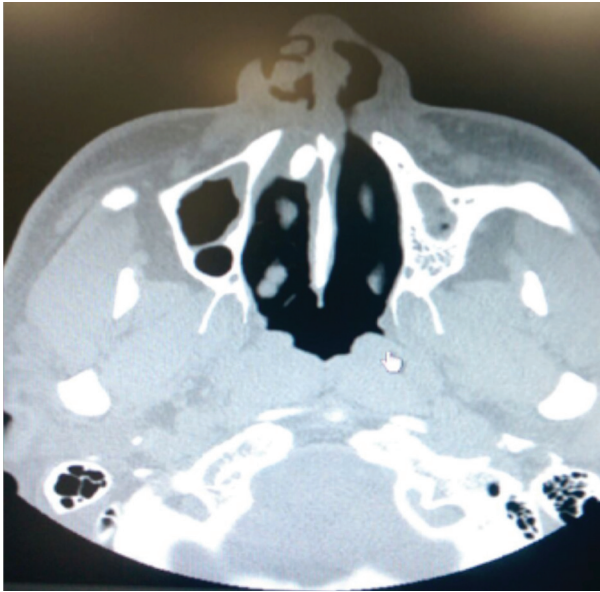


Figure 2: Ectopic Tooth in the Left Maxillary Sinus Close to the Nasal Septum



Figure 3: Ectopic Tooth after Surgical Removal

DISCUSSION

The development of a tooth has three stages which occur after the thickening of dental lamina: 1) bud stage 2) cap stage 3) bell, after which, eruption takes place². The thickening eventually becomes the enamel layer of the deciduous teeth². Anomalies odontogenesis could occur, such as the size, shape, number and structure³. Impacted teeth are mostly seen in females compared to males and in the mandible more than the maxilla⁴. The most common teeth to be impacted are the 3rd molars (lower more than upper). The other teeth that are frequently impacted are the maxillary canines, mandibular premolars, maxillary premolars. The maxillary molars and the maxillary lateral incisors are less frequently impacted⁴.

A supernumerary tooth is an additional tooth due to dental lamina being locally hyperactive, independent or heredity factor⁵. Ectopic eruption of a tooth may be due to developmental disturbance, pathologic process, such as a tumor or a cyst.

The most commonly involved are the mandibular third molar and the maxillary canine; the tooth could migrate to an ectopic area such as the nose, maxillary sinus and/or infraorbital area⁵. In the maxilla region, usually these teeth are displaced into the maxillary sinus⁵. The dentigerous cyst is an odontogenic cyst with fluid lying between the cyst wall and the unerupted tooth, usually it expands slowly⁵. The most common symptoms include facial swelling, rhinorrhea and nasolacrimal obstruction. These symptoms are also accompanied by facial pain and headache⁵. Our case presented with facial pain and nasal discharge.

To determine the position of the ectopic tooth, it is advised to use CT, MR, cone beam CT, orthopantomogram, and in some cases, a periapical radiograph^{7,5}. In our case, CT was used.

The treatment of an ectopic tooth is by either surgical removal of the tooth along with the cyst and drainage of the sinus via endoscopy and proper medication if symptomatic or to be left alone if asymptomatic⁸.

CONCLUSION

Epistaxis and facial pain due to ectopic eruption of teeth in the maxillary sinus is not common; however, most of the time, the problematic tooth is a maxillary third molar and not a supernumerary tooth. Treatment usually involves surgical extraction of the problematic tooth and drainage of the sinus which is frequently performed via endoscopic sinus surgery or the Caldwell-Luc Approach.

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