Ectopic Tooth In Osteomeatal Complex Presenting With Nasal Polyps: A Case Report

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Abstract

The ectopic eruption of tooth in the nasal cavity is uncommon with an incidence of less than 1.0%. Authors report a rare case of nasal polyposis associated with ectopic tooth obstructing the osteomeatal complex. The case was managed by functional endoscopic sinus surgery and the tooth was removed.

INTRODUCTION

Extra teeth are usually termed supernumerary but some authors reserve this term to describe extra-teeth that are ill formed while reserving the term supplemental for extra teeth that have the shape and size of normal teeth[1]. Intranasal tooth is a rare form of supernumerary teeth and may be associated with rhinosinusitis. We report a case of a 35 year old female with unilateral nasal polyps associated with an ectopic tooth in the osteomeatal complex.

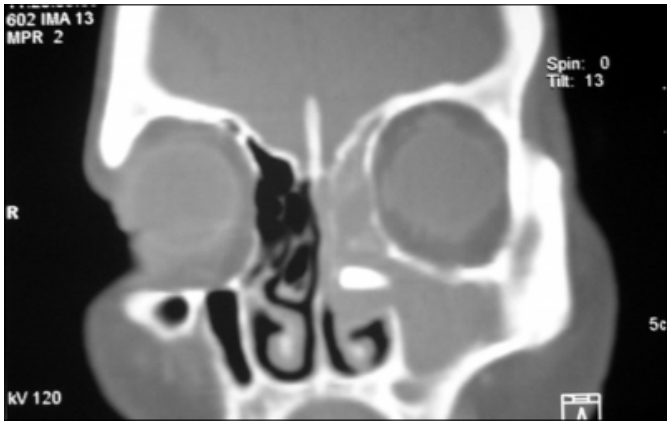
CASE REPORT

A 35 year old female patient presented in the outpatient department of Pt. BDS PGIMS Rohtak, India with a one year history of left sided nasal obstruction, nasal discharge and pain.

General physical examination of the patient was normal. Anterior rhinoscopy revealed nasal polyp in the left nasal cavity, right nasal cavity was normal. Rest of the Otorhinolaryngological examination was normal. Dental examination revealed that all teeth were present. Computer tomography scan of para-nasal sinuses axial and coronal view was done to assess the extent of the disease. It revealed nasal polyposis involving the left maxillary, ethmoid and frontal sinuses. A tooth was seen in the osteomeatal complex engulfed in the polypoid mass. (Fig1).

Figure 1

Figure 1: Ectopic tooth in the osteomeatal complex engulfed in the polypoid mass.



A diagnosis of nasal polyposis with ectopic tooth in the osteomeatal area was made and patient was taken up for functional endoscopic sinus surgery under local anesthesia. Nasal polyps were removed and uncinectomy, middle meatal antrostomy, anterior and posterior ethmiodectomy were performed using standard technique of FESS. The ectopic tooth was found engulfed in the polypoid mass and was removed. After two year of follow up patient was symptom free.

DISCUSSION

Nasal teeth are a rare form of supernumerary teeth. The incidence of supernumerary tooth in general population is 0.1 to 1.0% and out of these cases only a small percentage present with intranasal tooth[2]. The age at the time of diagnosis of intranasal teeth ranges from 3-62 years. There is no sex predilection. Usually single ectopic tooth is found but

multiple teeth have also been reported[3].

The supernumerary teeth may be asymptomatic and may only be noticed on routine radiological examination[2] as in the present case. The symptoms caused by the ectopic tooth include: unilateral nasal obstruction[4], foul smelling rhinorrhea[5], crusting, localized ulceration, nasal congestion[6], epistaxis and foreign body sensation[7]. The complications of ectopic intranasal teeth include rhinitis caseosa[8], oro-nasal fistula[9].

Ectopic nasal teeth are associated with rhinosinusitis[10]. They are reported most commonly from the maxillary sinus and only one case has been reported from the ethmoid sinus[11] and one from osteomeatal complex[12]. Ectopic tooth in the osteomeatal complex leading to recurrent sinusitis or nasal polyp formation is extremely rare. It should be suspected in a case of un-responsive unilateral sinusitis.

Clinically, an intra-nasal tooth may be seen as a white mass in the nasal cavity surrounded by granulation tissue and debris. On probing the tooth is usually hard, smooth and slightly movable. The diagnosis is not difficult, but may be missed most easily when the tooth is almost completely embedded in the nasal mucosa and is on the nasal floor, where it may be overlooked in the routine examination. In our case it was embedded in the nasal polyps hence was missed on clinical examination and was a coincidental finding in CT PNS done to assess the extent of nasal polyps. In this case the tooth was predisposing nasal polyposis because of its site in the osteomeatal complex.

Radiologically, the nasal teeth appear as radio-opaque lesion with the same attenuation as that of the oral teeth. The soft tissue surrounding the radio-opaque lesion is consistent with the granulation tissue found on clinical and pathological examinations. The exact relationships of the supernumerary tooth can be best studied by the panoramic radiology using an orthopantomogram. This can provide a good record of all the teeth present erupted or not[13,14].

The cause of ectopic tooth is not well understood. It has been attributed to crowded dentition, persistent deciduous tooth or exceptionally dense bone[12]. The other proposed pathogenic factors include a genetic predisposition, developmental disturbances such as cleft palate, rhinogenic or odontogenic infections and displacement as a result of trauma or cyst[3,4,14-16]. Rege et al described osteomyelitis of the maxilla as a cause of nasal teeth and reported three ectopic nasal teeth, following osteomyelitis of the maxilla[14].
The differential diagnosis of nasal teeth includes radio-opaque foreign body, rhinolith, inflammatory lesions like syphilis, tuberculosis, and fungal infections with calcification. Benign tumors including: hemangioma, osteoma, calcified polyps, enchondroma, dermoid and malignant tumors like chondrosarcoma and osteosarcoma[11].

The treatment of ectopic teeth is surgical. Removal of symptomatic intranasal teeth will alleviate the symptoms and prevent complications. The best time to remove the tooth is after the roots of the permanent teeth have completely formed to avoid injury during their development[14]. In case of asymptomatic teeth a close follow up is advised in case the patient is unwilling for removal[2,3,13,14].

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