

Case report:

Endoscopic Supernumerary Canine Tooth Extraction in an Adult Presented with Acute Nasal Blockage : A Case Report

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Abstract

Intranasal ectopic tooth, which can be derived from either supernumerary, deciduous or permanent tooth, is generally a rare event. Their existence can cause a wide array of complication such as epistaxis, nasal blockage, nasal pain, rhinosinusitis, septal deviation, septal abscess as well as oronasal fistula. We highlight a case of a canine supernumerary tooth that erupted at floor of nasal cavity, causing an acute unilateral nasal blockage, and managed successfully with an endoscopic nasal tooth extraction.

Keywords: Ectopic tooth, supernumerary, nasal floor, extraction, endoscopy, nasal blockage.

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Introduction

Supernumerary teeth are defined as tooth-like structure or teeth, in addition to the 32 permanent teeth or 20 primary teeth, regardless of state of eruption¹. It is regard as a developmental anomaly, which can be single or multiple, unilateral or bilateral, anywhere at the tooth bearing area, but most frequently at premaxilla¹. As the supernumerary teeth can exist during the primary, mixed, or permanent dentition, presence of these additional teeth, would be discovered when they cause dental complications, such as dentigerous cyst formation, tooth crowding, tooth displacement and midline diastema^{1,2}, as well as a wide array of nasal symptoms. In our case, it partially erupts inside the nasal cavity causing an acute unilateral nasal blockage, which warrants endoscopic extraction of nasal tooth.

Case report

A 53 years old gentleman, presented with acute onset of left nasal blockage, more on for 3 days duration. It is associated with a foul-smelling nasal discharge and left nasal pain. He denied any fever, epistaxis, or anosmia. The was no preceding

history of trauma and he was never been operated before.

Examination noted reduce misting on cold spatula test over bilateral nostril. There was a severe anterior deviated nasal septum to right side, with accidental finding of foreign body on the floor of left nostril. Bilateral osteomeatal complex were normal, and nasopharynx were clear. There was no polyps or pus seen.

Computed tomography of paranasal sinus was done, which revealed a 1.6 x 0.7 cm hyperdense lesion, resembling a tooth configuration noted in

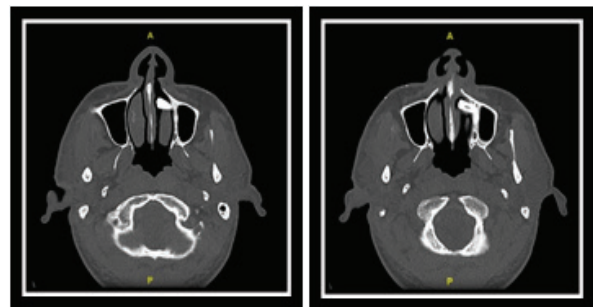


Figure 1 (a,b): Computed tomography image showing a hyperdense foreign body at left nasal cavity with a central filling defect.

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the alveolar process of left maxilla, protruding into the left nasal cavity. The lesion was abutting the left inferior nasal turbinate (Fig.-1).

We proceed with septoplasty, bilateral inferior turbinate reduction and foreign body removal under general anesthesia for him. Intraoperatively noted right deviated nasal septum with septal spur, and a nasal tooth at the floor of left nasal cavity and pushing the left inferior turbinate upward and obstructing left nostril (Fig.-2). We are able to remove the tooth in-toto (Fig.-3). There was no

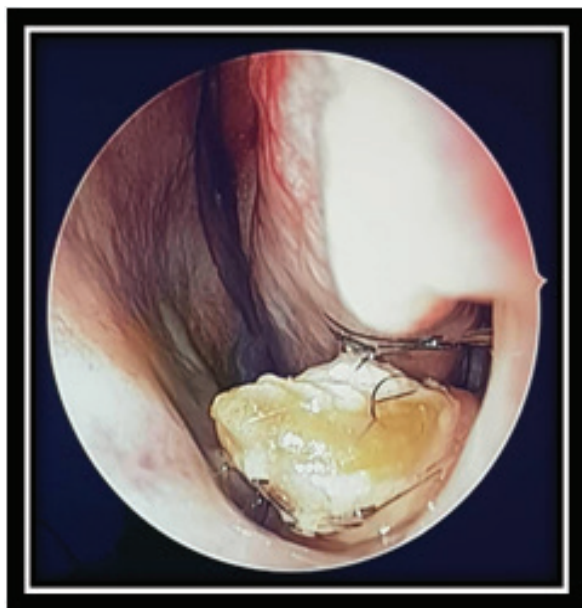


Figure 2 : Endoscopic finding of intranasal tooth occupying the floor of left nasal cavity.



Figure 3: Complete removal of normal nasal incisor tooth.

mucosa breach intraorally, and his upper dentition – incisor, canine and molar were all present and intact.

Histopathological examination noted a complete normal incisor tooth with its pulp and dentine. The attached tissue is partly lined by respiratory type epithelium and partly by squamous epithelium. The surrounding tissue is markedly infiltrated by chronic inflammatory cells predominantly plasma cells. There was no malignant cell detected.

Based on normal dentition intraorally, we conclude that the tooth was an erupted supernumerary incisor type tooth into the nasal cavity, presented with acute onset of nasal blockage, which warrant the endoscopic management. Post operatively and during follow-up, the patient recovered well with no more nasal symptom and no oronasal fistula detected.

Discussion

Supernumerary tooth is a rare occurrence, with incidence of 0.1-1% in general population³, and become much rarer if it present intranasally^{3,4}. There are multiple theories of the development of nasal tooth and it is still unclear. However, the potential causes include maxillofacial trauma, cleft palate, cleidocranial dysostosis, infection such as syphilis or osteomyelitis of maxilla³ and Gardner's syndrome⁵. Supernumerary tooth specifically, is still a mysterious entity with an unknown etiology and predisposing factor^{1,5}.

In our patient, we were neither can identify any factor contributing to the development of intranasal tooth, nor why the tooth suddenly erupted causing the acute nasal blockage. Krishnan et al (2013) in their paper mention that the exact eruption time of a supernumerary teeth is unpredictable⁶ and some of this tooth remain undiagnosed if asymptomatic⁶. Iwai et al (2012) found that male is more commonly affected than female with ratio approximately 2:1³.

The diagnosis of intranasal tooth most of the time is straightforward, due to the characteristic clinical and radiological findings⁷. In this patient, the nasal tooth is classified as supernumerary tooth because all the other permanent teeth are present intraorally. However, during assessment of intranasal ivory white mass, we should also consider differential diagnosis of foreign body, granulomatous infections, rhinoliths as well as osteoma odontoma or a cyst lesion^{5,7}. Thus, other additional tests and procedures, for example, nasoendoscopy, orthopantomogram, and CT scan would be valuable. In CT, highly suggestive

features of tooth are presence of a centrally located cavity and a tooth-equivalent attenuation⁷.

Treatment of ectopic intranasal tooth is early extraction¹⁻⁷ to avoid future complication, via transpalatal or transnasal approach⁷. Literature review point out that transoral removal of intranasal supernumerary tooth have more risk of complications such as oronasal fistula, inadvertent damage to adjacent teeth as well as injury to neurovascular bundle⁴.

We prefer endoscopic assisted extraction that significantly reduced postoperative morbidity and shorter hospital stay, thanks to the added benefit of endoscope such as precise dissection, clear visualization and good illumination⁵⁻⁷. During the endoscopic extraction procedure for this patient, after careful inspection of the left nasal floor erupted tooth, we slowly released and extracted the tooth in an attempt to unharmed surrounding

tissue. This is important as vigorous maneuver could potentially damage nasal tissue that could cause later complication of oroantral fistula.

Conclusion

Supernumerary canine tooth that cause an array of nasal symptom is a rare event that better treated endoscopically for better outcome.

Conflict of Interest

No Conflict of interest has been disclosed by the authors.

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Authors Contributions

Conception and design: NSMS, AZ

Collection and assembly of data: NSMS, RRR, AZ

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