Nasal tooth: case report

Osama Masoud

Department of Otorhinololaryngology, Benha University, Benha, Egypt

Correspondence to Osama Masoud MD
Kuwait, Al Shaab Medical Centre,
P.O. Box: 525 -Safat-code 13016,
Egypt Banha.
Tel. 00201112071742; 0096595583811
e-mail: osamahanafy2@gmail.com

Received 04 August 2020
Revised 01 September 2020
Accepted 15 October 2020
Published 09 August 2021

Pan Arab Journal of Rhinology
2021, 11:64–66

Background
Unilateral nasal obstruction with fetor comes to our mind with a differential diagnosis including foreign bodies and rhinolith. With computed tomography (CT) scan, nasal teeth could be added as well. They arise from ectopic or supernumerary teeth.

Case presentation
The patient came with a late presentation of right nasal obstruction and foul smell. Patient was diabetic, poorly cultured, and debilitated. Examination revealed right nasal foul discharge. Diagnostic CT was done, and the patient underwent an endoscopic procedure. Tooth was embedded within the granulation tissue and was associated with fungal infection. It was removed completely, and the patient passed a steady symptom-free postoperative course.

Conclusion
Nasal teeth are uncommon. Their diagnosis depends upon CT scan and surgical findings. Surgical removal is their definite successful treatment.

Keywords:
ectopic, nasal, supernumerary, tooth

Pan Arab J Rhinol 11:64–66

Background

Ectopic position of teeth is a common condition, with an incidence of ~3% [1]. The presence of teeth has been reported in ovaries, testes, anterior mediastinum, and presacral regions. In the maxillofacial region, teeth have been found in maxillary sinus, mandibular condyle, coronoid process, chin, nose, and even orbit. Approximately 50 cases of a tooth in the nasal cavity have been reported in the literature. However, an intranasal tooth in cases of cleft lip and palate is comparatively rare [2]. The etiology of nasal tooth is unclear. Theories explaining it include developmental disturbances, infections, genetic factors, trauma, crowding of dentition, cysts, persistent deciduous teeth, or exceptionally dense bone [3]. This unusual situation should be suspected in patients with nasal obstruction and unilateral fetid purulent rhinorrhea [4]. The teeth may be asymptomatic or cause a variety of signs and symptoms, including facial pain, nasal obstruction, headache, epistaxis, foul-smelling rhinorrhea, external nasal deformities, and nasolacrimal duct obstruction [3,5]. Complications of nasal teeth include rhinitis caseosa with septal perforation, aspergillosis, and naso-oral fistula [6]. The diagnosis of nasal tooth is made on the basis of clinical and radiographic findings. Radiographically, the nasal teeth appear as radiopaque lesions with the same attenuation as that of the oral teeth [7].

Case presentation

A 60-year-old female patient with poorly controlled diabetes mellitus, came to the clinic with ~2 years of a vague history of nasal complaint. The patient was illiterate and was not cooperating well for history taking with unclear language. The author made stress on that point (relatively short history of 2 years) and tried to compare the findings with data from relatives. They had started to notice bad smell about 2 years before seeking care at our hospital. She had a stationary course of right nasal obstruction with obvious fetor and frequent mucoid nasal discharge. The patient gave a history of spontaneously fallen canine tooth about 5 years ago before coming to the hospital. This was followed by vigorous chocking without any history of trauma. Examination was poorly informative, just mucinous discharge and mild inferior turbinate enlargement. Fetor was a clear sign. The patient was not cooperative for endoscopic examination. The patient was of relatively low mentality. She was living in an isolated desert community hundreds of kilometers away from urban areas. Paranasal Sinuses computed tomography scan was requested.

The report concluded the following data: right maxillary sinus shows mild circumferential mucosal thickening and obliteration of right osteomeatal complex, picture suggestive of right maxillary sinusitis, mild right inferior nasal turbinate hypertrophy, a small oval hyperdense focus is seen barely attached to the bony nasal septum and inferior turbinate, which

recorded high density and was measuring about 0.5 × 1.5 cm (Fig. 1a), and there was an element of rarefaction of medial wall of right maxillary sinus associated with two dense foci (mostly calcification) seen lateral to the level of expected right middle nasal turbinate (Fig. 1b).

During endoscopic surgery, minimal pathology was encountered in right middle meatus with little mucosal thickening and a middle meatal antrostomy was done easily. On right nasal cavity floor (Fig. 2) and under cover of inferior turbinate, a firm irregular pinkish mass was found. A swap of nasal discharge was made and sent for microbiologic examination.

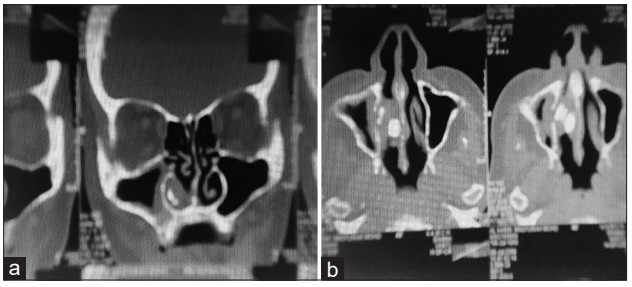
The mass was removed in pieces. While removal of the mass, a hard ivory white piece was found. Although it was more or less adherent, it was manipulated and enucleated completely. A surprise was there, it was a tooth (Fig. 3a and b). Histopathology report recorded a nonspecific granuloma, whereas microbiologic results revealed Aspergillus flavus. The patient became free of symptoms within a few days.

Discussion

Tooth enclosed within such a granuloma was really surprising. Thinking about a dentigerous cyst was not favored, as dentigerous cysts never exist within a granuloma; moreover, this is not a recorded site for them [8] (Table 1). Dermoid cyst was excluded as well because of age of presentation and unusual site. Choudhury and Das [4] have explained it as an ectopic teeth eruption (supernumerary tooth). Its incidence was thought to be ~0.1–1% of the population [9].

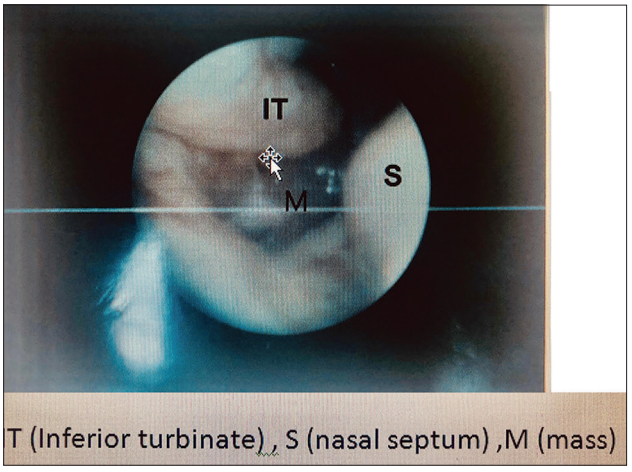
Supernumerary teeth develop either from a third tooth bed that arises from the dental lamina near the permanent tooth bud or, possibly, from splitting of the permanent bud itself. Another theory is that their development is a reversion to the dentition of extinct primates, which had three pairs of incisors [9]. Although the cause of ectopic growth is not well understood, it has been attributed to obstruction at the time of tooth eruption secondary to crowded dentition, persistent deciduous teeth, or exceptionally dense bone. Other proposed pathogenetic factors include a genetic predisposition; developmental disturbances, such as a cleft palate; rhinogenic or odontogenic infection; and displacement as a result of trauma or cysts [10]. Finding a nasal tooth within granulation tissue agrees with findings of Smith *et al.* [3]. Age of presentation of our case was wondrous, but in the report of three cases by Albert *et al.* [7], their third case was very similar to ours regarding age, fetor, existence within granuloma, and

Figure 1



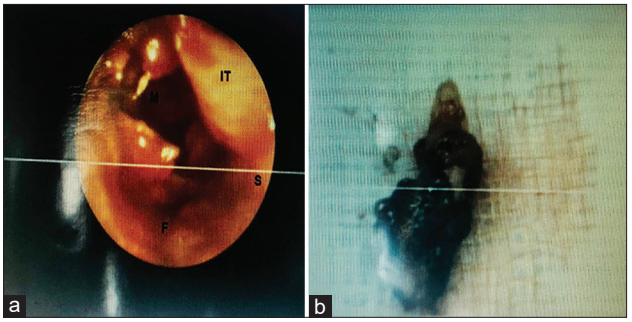
Radiologic findings a) coronal cuts b) axial cuts

Figure 2



Sinuscopic findings

Figure 3



Endoscopic findings a) graneuloma after penetration b) removed tooth

Table 1 Site distribution of 37 cases of dentigerous cyst [8]

Jaw	Incisor [*n* (%)]	Canine [*n* (%)]	Premolar [*n* (%)]	Molar [*n* (%)]	Unknown [*n* (%)]	Total [*n* (%)]
Maxilla	2 (5.4)	15 (40.5)	1 (2.7)	0	2 (5.4)	20 (54)
Mandible	1 (2.7)	4 (10.8)	3 (8.1)	7 (18.9)	2 (5.4)	17 (46)
Total	3 (8.1)	19 (51)	4 (10.8)	7 (18.9)	4 (10.8)	37 (100)

Aspergillus infection, yet they had not explained such a very late presentation.

Removal of nasal teeth is generally advocated to alleviate the symptoms and prevent complications. This was the recommendation of all authors who encountered similar cases. Patients became symptom free very soon with steady postoperative courses.

Conclusion

Nasal teeth are not common. Mostly they are ectopic teeth. They present as unilateral nasal obstruction with or without foul smell. Computed tomography scan is their diagnostic tool. They are commonly associated with fungal infection. Surgical removal is the single and safest way to treat them.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1 Young DH. Ectopic eruption of permanent first molar. J Dent Child 1957; 24:153–162.

2 Gupta YK, Shah N. Intranasal tooth as a complication of cleft lip and alveolus in a four year old child: case report and literature review. Int J Pediatr Dent 2008; 11:221–224.

3 Smith RA, Gordan NC, Deluchi SF. Intranasal teeth: report of two cases and review of the literature. Oral Surg Oral Med Oral Pathol 1979; 47:120–122.

4 Choudhury B, Das AK. Supernumerary tooth in the nasal cavity. Med J Armed Forces India 2008; 64:173–174.

5 Alexandrakis G, Hubbell RN, Aitken PA. Nasolacrimal duct obstruction secondary to ectopic teeth. Ophthalmology 2000; 107:189–192.

6 El-Sayed Y. Sinonasal teeth. J Otolaryngol 1995; 24:180–183.

7 Albert C, Jon KH, Sho JC, Chin YS. Nasal teeth: report of three cases. Am J Neuroradiol 2002; 23:671–673.

8 Ali H. Dentigerous cyst: a review of 37 cases. Thamar Univ J Stud Res 2006; 2006:9.

9 Thawley SE, Ferriere KA. Supernumerary nasal tooth. Laryngoscope 1977; 87:1770–1773.

10 Moreano EH, Zich DK, Goree JC and Graham SM. Nasal Tooth AmJ. Otolaryngol. 1998;19:124-126