European Journal of Dental and Oral Health
Vol 5 | Issue 3 | May 2024
ISSN 2684-4443

CASE STUDY

Intranasal Tooth in a Patient with Cleft Lip and Palate: Case Report

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ABSTRACT

A rare form of ectopic teeth is the nasal tooth. This is a very rare clinical phenomenon. A clear etiology was not suspected in most of the reported cases. However, many etiologies have been identified, including maxillary osteomyelitis, dental trauma, nasal infections, development of defects such as cleft palate, and genetic factors. It can cause a variety of problems, like nasal obstruction, chronic rhinorrhea, and voice disturbances. Surgical removal of the tooth has been suggested as a treatment to reduce symptoms and prevent further complications.

Keywords: Cleft lip and palate, Extraction, Intranasal tooth.

Submitted: March 25, 2024

Published: May 16, 2024

10.24018/ejdent.2024.5.3.331

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1. Introduction

In dental clinical practice, Supernumerary teeth are regularly reported; nevertheless, sinus and nasal cavity eruption is a very uncommon clinical condition. The frequency of nasal teeth is 0.1%–1% of the population [1]. Ectopic teeth are typically noticed on the palate, in the maxillary sinus, or on the floor of the nasal cavity, but are rarely appeared in the inferior turbinate. Children with cleft lip and palate are more likely to have intranasal ectopic teeth [2]–[4]. Nasal obstruction, nasal hemorrhage, septal abscess, chronic inflammation with ongoing discharge and crusting, and oral-nasal fistula are among the clinical manifestations [1]. This article aims to present a rare case of an ectopic tooth in the nasal cavity, associated with the cleft lip and palate of a 5-year-old child.

2. Case Report

A 5-year-old patient with no specific pathological history was consulted for epistaxis by the right nasal fossa associated with a fetid rhinorrhea, for 7 months. She was referred to the Department of Pediatrics in the Center of Consultations and Dental Treatment of Rabat. Medical history revealed that she was born with a unilateral left lip and palate and operated on at 6 months of age. The clinical examination reveals a patient in good shape. Examination of the nasal cavities found some blood clots and a tooth was visible in the right nasal cavity (Fig. 1).

A radiographic examination showed a radiopaque mass inside the right nasal cavity. Panoramic radiography was realized, which showed the presence of a radiopaque mass identical to an incisor tooth on the right nasal cavity. For detailed radiographic examination, a Cone Beam Computed Tomography (CBCT) was requested and a high-density area was found located in a nasal nostril (Fig. 2).

The surgical removal of the ectopic tooth was performed under general anesthesia, principally because of the potential transoperative bleeding and the non-compliance behavior of the patient in the vigilant state.

After infiltration of local anesthesia with a vasoconstrictor (Fig. 3), the intranasal tooth was removed (Fig. 4). All dental treatment was completed in the same visit; it consisted of restoration of the decayed tooth (51, 53, 75, 85) and a fluoride application was made. A follow-up of 3 to 6 months will be instituted to detect and take care of any carious lesion early.

3. Discussion

In the available literature, the occurrence of an intranasal tooth is relatively rare compared to other cases of ectopic eruption. In this particular case, we present the discovery

Fig. 1. Photo of a child under general anesthesia exposing a tooth in the right nasal cavity.

Fig. 2. An ectopic tooth is visible in the right nasal cavity on CT scans.

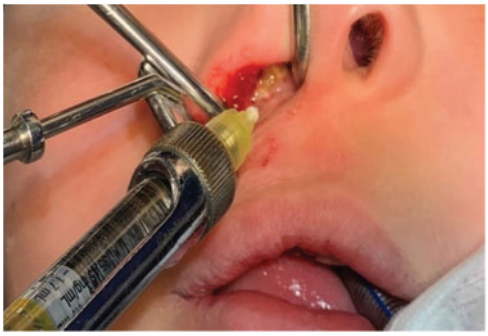

Fig. 3. Infiltration of local anesthesia.

of a permanent tooth located within the nasal cavity of a 5-year-old girl. Early detection occurred due to the patient's experience of epistaxis and fetid rhinorrhea. Diagnosing an intranasal tooth can be challenging as it often lacks noticeable clinical symptoms and presents with vague manifestations, leading to potential oversight. While patients typically do not exhibit symptoms, some may experience facial pain, headaches, nasal obstruction, epistaxis, foul-smelling rhinorrhea, external nasal deformities, or nasolacrimal duct obstruction [5], [6].

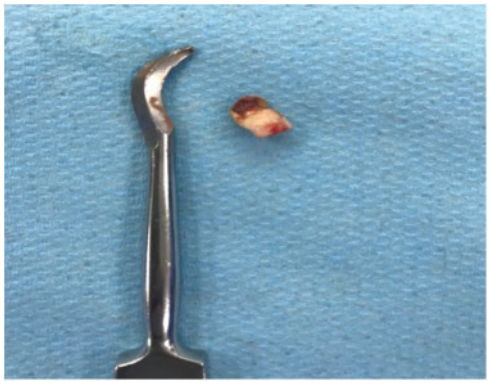

Fig. 4. Tooth removed.

Clinically, intranasal teeth may appear as hard white masses without a nasal mucosa covering, making diagnosis relatively straightforward. However, in some cases, the intranasal tooth may be embedded in the nasal mucosa and surrounded by debris, granulation tissue, and ulcerative materials. In such situations, a differential diagnosis must be considered, including foreign bodies, rhinoliths, inflammatory lesions associated with tuberculosis, syphilis, or fungal infections with calcification, benign tumors like osteoma, hemangioma, calcified polyps, dermoid, enchondroma, and malignant tumors like chondrosarcomas and osteosarcomas, as well as exostoses [4], [1], [7]–[9].

Radiographically, intranasal teeth can be detected on panoramic X-ray films, occlusal X-ray films, or other facial X-ray films, appearing as tooth-like radiopaque masses with similar attenuation to that of oral teeth.

Cone-beam computed tomography (CBCT) can be valuable in confirming the three-dimensional position of the tooth and its relationship with anatomical structures, aiding in the confirmation of diagnosis and facilitating surgical planning [4]. In our case, the proposed treatment to alleviate symptoms and prevent further complications involved surgical removal of the tooth [5], [10]. However, it is important to note that even when the tooth is not embedded in the bone, the procedure carries potentially significant complications, such as hemorrhage, and infection, necessitating the administration of general anesthesia as a safer protocol [5], [11].

When the tooth is located within a bony socket on the nasal floor, the procedure becomes particularly challenging. Two approaches can be employed based on the tooth's position within the nasal cavity: intranasal or transnasal.

Compared to conventional methods, endoscopic removal offers several advantages. These include improved visibility due to optimal lighting, accurate identification of nearby structures, precise dissection, shorter hospital stays, and enhanced safety. Several authors suggest that the optimal timing for removing an ectopic nasal tooth is after the complete formation of permanent tooth roots to minimize the risk of inadvertent injury. They also recommend utilizing a rigid endoscope for this operation [12], [9].

4. Conclusion

The nasal tooth is a scarce form of ectopic tooth that occurs in otolaryngology clinics and can cause a large variety of symptoms and complications. Their diagnosis is not complicated. It mainly depends on clinical features and radiological findings. In the majority of cases, the cause of intranasal teeth remains unknown. CT is very helpful. Confirms diagnosis and facilitates surgical planning. To sum up, it is crucial to get diagnosed and treated as soon as possible to prevent problems.

Conflict of Interest

Authors declare that they do not have any conflict of interest.

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