Supernumerary tooth in the nasal cavity

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Abstract

Intranasal ectopic dentition is a rare clinical entity. 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. A 21-year-old female patient presented with complaints of intermittent right-sided epistaxis and a history of occasional headache for 6 months. An anterior rhinoscopic examination revealed a hard white mass surrounded by granulation tissue lying in the floor of the right nasal cavity. The clinical appearance was that of a rhinolith. Supernumerary teeth are extra to normal complement in dentition. They may occur unilaterally or bilaterally, single or multiple. A variety of complications can occur ranging from crowding to cyst formation. Hence, early identification and treatment are essential for management.

Keywords: Dentition, ectopic, epistaxis, supernumerary tooth

INTRODUCTION

Intranasal ectopic dentition is a rare clinical entity. The presence of teeth has been reported in ovaries, testes, anterior mediastinum and presacral regions.[1, 2] In the maxillofacial region, teeth have been found in maxillary sinus, mandibular condyle, coronoid process, chin, nose and even orbit. The conditions commonly associated with an increased prevalence of ectopic teeth include cleft lip and palate, cleidocranial dysplasia and Gardner syndrome. Intranasal teeth can cause problems such as nasal obstruction, chronic rhinorrhea and speech problems. The most common ectopic tooth which appears in the maxillary midline is called a mesiodens. This unusual situation should be suspected in patients with nasal obstruction and unilateral purulent rhinorrhea.[3‑7]

CASE REPORT

A 21-year-old female patient presented with complaints of intermittent right-sided epistaxis and a history of occasional headache for 6 months. An anterior rhinoscopic examination revealed a hard white mass surrounded by granulation tissue lying in the floor of the right nasal cavity. The clinical appearance was that of a rhinolith. An orthopantomography revealed the presence of a radio-opaque tooth shape mass, suggestive of a supernumerary tooth since the intraoral dental occlusion was complete. Computed tomography (CT) scan was necessary to evaluate the exact position of the presumed supernumerary tooth and its relation with the surrounding structures. The CT examination revealed that the mass lesion resembled a conical-shaped structure tapering to a point suggestive of a tooth lying in the...
anteroposterior direction [Figure 1]. The patient underwent an endoscopic removal of the supernumerary tooth under general anesthesia. Once tooth was localized, the covering periosteum was removed, the tooth was dislocated from its site of impaction and it was extracted with forceps through the right nostril [Figures 2 and 3]. Postoperative course was uneventful.

DISCUSSION

The incidence of supernumerary teeth generally affects 0.1%–1% of the population. The most common location is the upper incisor area, known as the mesiodens. The etiology of supernumerary teeth is not completely understood. One theory suggests that the supernumerary tooth is created either from a thin tooth bed that arises from the dental lamina near the permanent tooth bud or from splitting of the permanent bud itself.[1,2] Another theory is that their development is a reversion to the dentition of extinct primates, which had three pairs of incisors. The hyperactivity theory suggests that supernumeraries are formed as a result of local, independent, conditioned hyperactivity of the dental lamina. Heredity may also play a role in the occurrence of this anomaly, as supernumeraries are more common in the relatives of affected children than in the general population. However, the anomaly does not follow a simple Mendelian pattern.[3-5]

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 pathogenic 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.[2-4]

Multiple supernumerary teeth are rare in individuals with no other associated diseases or syndromes. It is often associated with cleft lip and palate, cleidocranial dysplasia and Gardner syndrome. While there is no significant sex distribution in primary supernumerary teeth, males are affected approximately twice as frequently as females in the permanent dentition.[4-7]

The extra teeth have an atypical crown with a vertical, horizontal or inverted position. They may grow and appear on the palate as extra teeth or they may grow into the nasal cavity. 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. Complications of nasal teeth include rhinitis caseosa with septal perforation, aspergillosis and ononasal fistula.[2-3]
The diagnosis of supernumerary teeth is made on the basis of clinical and radiographic findings. Clinically, an intranasal tooth may be seen as a white mass in the nasal cavity surrounded by granulation tissue and debris. Radiographically, it appears as radiopaque lesions with the same attenuation as that of the oral teeth. With the bone window setting, the central radiolucency, which is correlated with the pulp cavity, may have a spot or slit, depending on the orientation of the teeth. The soft tissue surrounding the radiopaque lesion is consistent with granulation tissue found on clinical and pathologic examinations.\cite{4-7}

The differential diagnosis of nasal teeth includes radiopaque foreign body, rhinolith, inflammatory lesions due to syphilis, tuberculosis or fungal infection with calcification, benign tumors, including hemangioma, osteoma, calcified polyps, enchondroma and dermoid and malignant tumors, such as chondrosarcoma and osteosarcoma. However, the CT findings of tooth-equivalent attenuation and a centrally located cavity are highly discriminating features that help to confirm the diagnosis.

Removal of nasal teeth is generally advocated to alleviate the symptoms and prevent complications. When an extra tooth is in the nasal cavity, the procedure is usually a minor operation. When a supernumerary tooth presents with a bony socket in the floor of the nose, its extraction may prove to be extremely challenging. CT is useful to evaluate the depth of the eruption site. The best time to remove the tooth is after the roots of the permanent teeth have completely formed, to avoid any injury during their development.

**CONCLUSION**

Supernumerary teeth are extra to normal complement in dentition. They may occur unilaterally or bilaterally, single or multiple. A variety of complications can occur ranging from crowding to cyst formation. Hence, early identification and treatment are essential for management.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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