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REVIEW ARTICLE

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Tooth in the Nose: A Very Rare Clinical Entity

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ABSTRACT

The presence of tooth in the nasal cavity is a rare and unnatural phenomenon. Literature suggests that supernumerary teeth, ectopic eruption, trauma, cysts, rhinogenic or odontogenic maxillary infections, cleft of the lip or palate, genetics and presence of a third tooth bud may be potential predisposing factors for the tooth to occur in the nasal cavity. The etio pathogenesis, theories, diagnosis, complications and management for this condition are discussed. With the advent of sinonasal endoscopy in the mid 1980s, and subsequent advances in surgical techniques, endoscopic management of intranasal lesions has become possible.

Key words: Nasal Tooth, Ectopic Eruption, and Supernumerary Teeth.

INTRODUCTION

Intranasal ectopic dentition is a rare clinical entity. The presence of teeth has been reported in ovaries, testes, anterior mediastinum, and pre-sacral regions. 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 rhinorrhoea 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 fetid purulent rhinorrhoea (**Choudhury and Das 2008**). The ectopic eruption of tooth in the nasal cavity is uncommon with an incidence of 0.1 to 1.0% (**Chen, et al., 2002**).

Etiopathogenesis: A supernumerary tooth originates from the third tooth bud, which arises from the dental lamina near the permanent tooth bud. It may or may not resemble the parent tooth either in shape or size, and is usually found in greatest frequency in certain sites. Mesiodens is the most common supernumerary tooth found between the upper central incisors either single or in pair. The next in frequency is the maxillary fourth molar called the paramolar found distal to third molar. (**Hiranandani and Melgiri 1968**). 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 (**Kumar 2009**).

Theories: The etiology of supernumerary teeth is not completely understood. One theory suggests that the supernumerary tooth is created either from a thin tooth bud that arises from the dental lamina near the permanent tooth bud or 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. 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. 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 (**Choudhury and Das 2008**).

Complications

1. Recurrent or chronic sinusitis
2. Nasal or cheek pain
3. Speech problems,
4. Nasal obstruction
5. Recurrent epistaxis,
6. Headache,
7. Nasal discharge
8. Localized ulceration
9. Foul smell
10. External deviation of nose, or nasal septal abscess (**Ozturk, 2007**).

Diagnosis

The diagnosis of nasal 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, the nasal teeth appear 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.

The differential diagnosis of nasal teeth includes radiopaque foreign body, rhinolith, inflammatory lesions due to syphilis, tuberculosis, or fungal infection with calcification, benign tumours, including haemangioma, osteoma, calcified polyps, enchondroma, and dermoid and malignant tumours, such as chondrosarcoma and osteosarcoma (Kim et al., 2003). Other methods include panoramics, CT scans, MRI (Mansour (2008).

MANAGEMENT

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 tooth has a bony socket in the floor of the nose, it may be extremely difficult to extract. 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 injury during their development.

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