

Stomatology in functional endoscopic sinus surgery – 2 case reports

„Stomatologia” w chirurgii endoskopowej zatok przynosowych – opis dwóch przypadków

Paulina Kołodziejczyk, Tomasz Gotlib

Department of Otolaryngology, Medical University of Warsaw, Poland; Head of Department: prof. dr. hab. n. med. Kazimierz Niemczyk

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ABSTRACT: Functional endoscopic sinus surgery (FESS) is most commonly used in chronic rhinosinusitis treatment. This method is also applicable to other diseases, including the treatment of symptomatic ectopic teeth. Ectopic teeth are a quite rare phenomenon. They may appear within the facial region, as well as in other parts of the body. The article describes two cases of ectopic teeth appearing within the nose area and paranasal sinuses, there endoscopic surgery has been used in the extraction, which resulted in the remission of symptoms.

KEYWORDS: ectopic tooth, nasal tooth, tooth in maxillary sinus

STRESZCZENIE: Chirurgia endoskopowa zatok przynosowych najczęściej dotyczy leczenia przewlekłego zapalenia zatok przynosowych. Metoda ta ma zastosowanie również w innych schorzeniach, między innymi w przypadku zębów ektopowych. Zęby ektopowe są dość rzadkim zjawiskiem. Mogą pojawić się w obrębie twarzoczaszki, jak i w innych częściach ciała. W artykule opisano dwa przypadki występowania zębów ektopowych, w obrębie nosa i zatok przynosowych, w których zastosowano chirurgię endoskopową w celu ekstrakcji, co spowodowało ustąpienie objawów.

SŁOWA KLUCZOWE: ząb ektopowy, ząb nosowy, ząb w zatoce szczękowej

CASE REPORT

Case 1

A 19-year-old female patient was admitted to the Chair and Department of Otolaryngology of the Medical University of Warsaw because of mucoceles in the right maxillary sinus. The patient reported permanent nasal discharge and facial pain described as a pressure in the right suborbital region for six months. Computed tomography showed opacification of the right maxillary sinus with expansion of the medial maxillary sinus wall, which significantly impaired patency of the right nasal cavity. CT scan also revealed a molar-shaped ectopic tooth located in the floor of maxillary sinus (Fig. 1). Central nasoantrostomy with ungiectomy was performed. The sinus

cavity was cleaned of inflammatory masses and ectopic tooth was removed.

The patient felt well after the procedure. At postoperative follow-up six months later, the patient reported remission of symptoms. Repeated CT showed an open, patent right maxillary sinus without ectopic tooth (Fig. 2).

Case 2

A 25-year-old patient was consulted in laryngological clinic due to recurrent acute rhinosinusitis with recurrent purulent discharge and nasal obstruction. Rhinoscopy showed nasal septum deviation and inferior nasal concha hyperplasia. Fur-

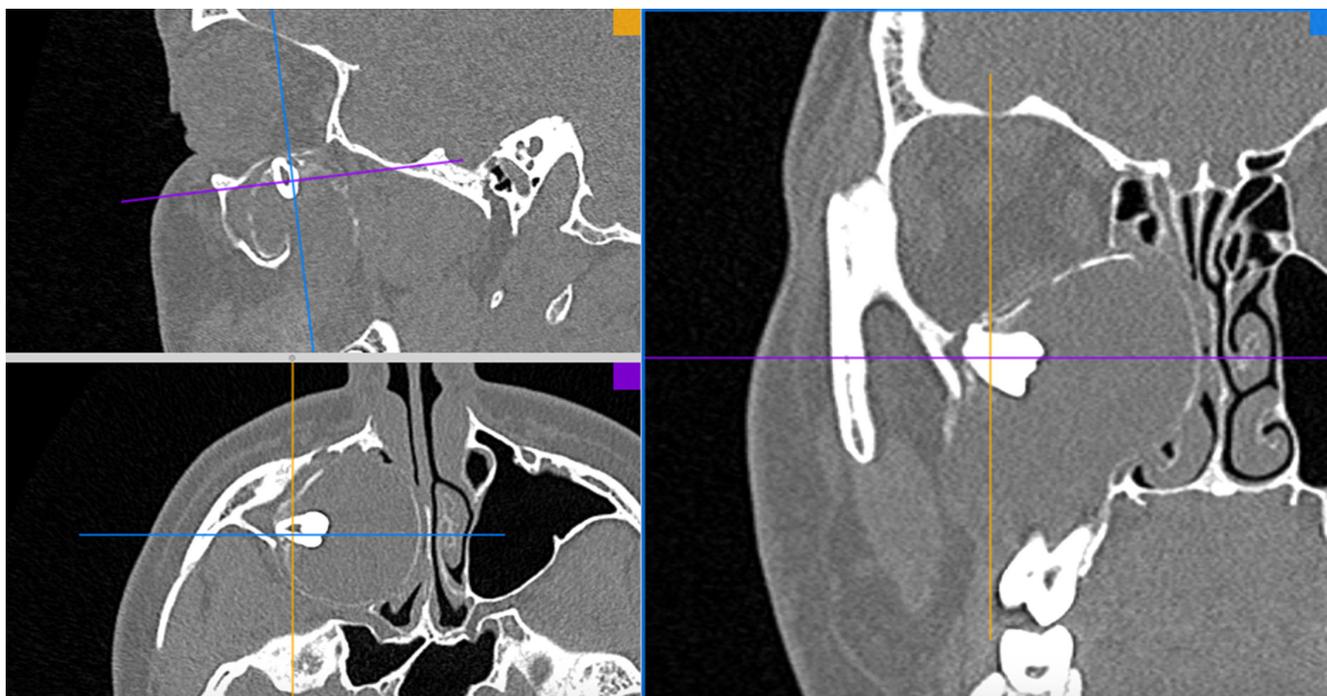


Fig. 1. Computed tomography imaging. Three projections show an ectopic tooth in a distorted right maxillary sinus filled with inflammatory masses.

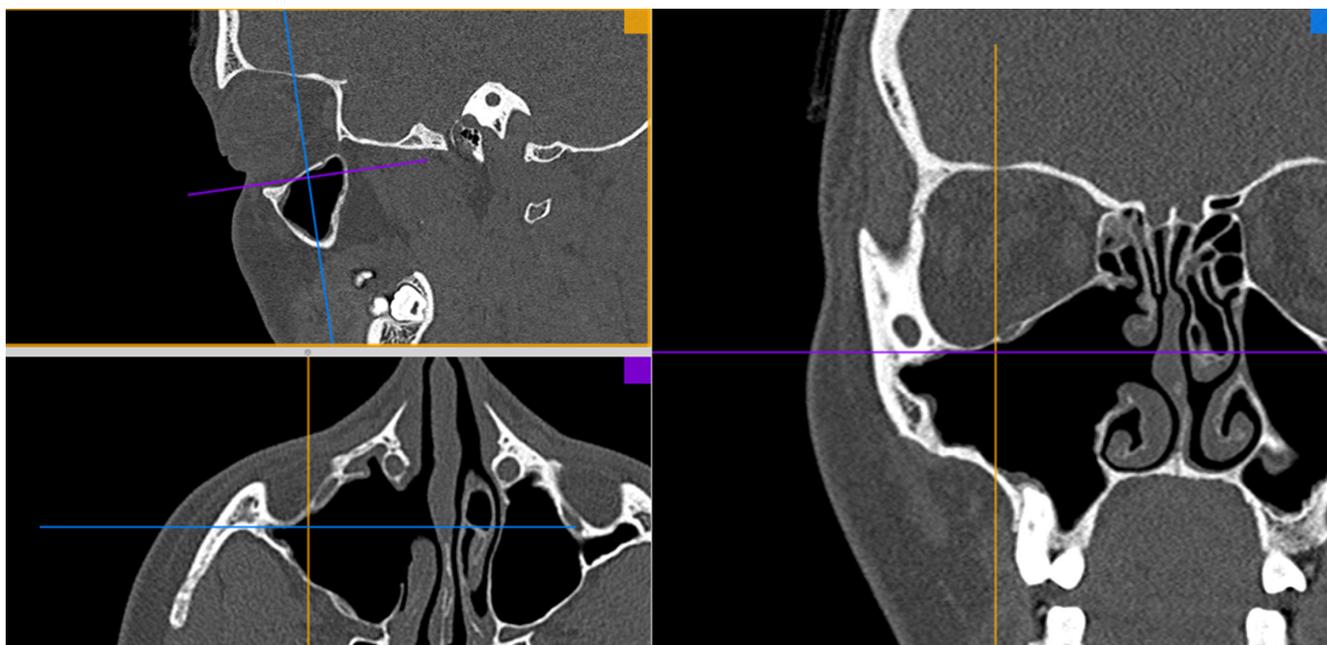


Fig. 2. Computed tomography imaging. Condition after extraction of ectopic tooth, without signs of sinusitis.

thermore, CT showed ectopic tooth located in the hard palate in the left nasal cavity floor (Fig. 3). During endoscopy, after nasal cavity mucosa decongestion ectopic incisor tooth was present on the left nasal cavity floor. The ectopic tooth was removed with the forceps (Fig. 4, Fig. 5).

Next, septoplasty, bilateral conchoplasty of inferior turbinates, removal of concha bullosa and nasoantrostomy of the right maxillary sinus were performed. The patient felt well after the procedure. On follow-up examination 6 months later, the patient was symptom-free.

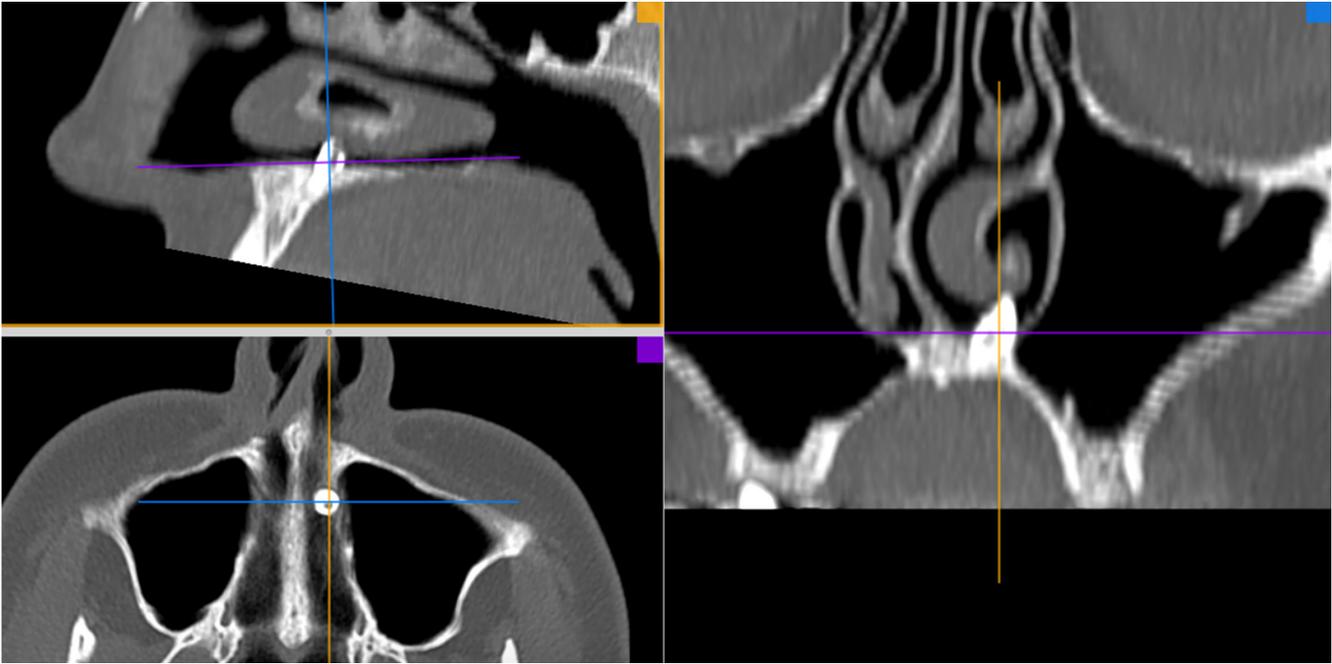


Fig. 3. Computed tomography imaging. Three projections show an ectopic tooth evident in the hard palate, which punctures into the left nasal cavity.

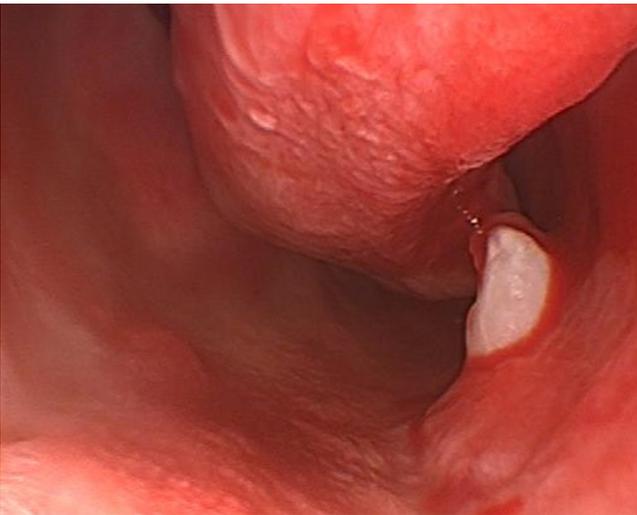


Fig. 4. Ectopic tooth in the left nasal cavity fundus after shrinkage of the nasal mucous membranes.



Fig. 5. Removed tooth.

DISCUSSION

Ectopic teeth are located in the human body outside of the oral cavity. The incidence of supernumerary teeth generally affects 0.5% of the population [1]. Diagnosis of ectopic teeth in the maxillofacial region is made on the basis of an interview, physical examination and results of radiological examinations. The ectopic tooth may mistakenly be diagnosed as a granulation tissue or discharge in rhinoscopy. In the radiological exami-

nation, ectopic teeth, as well as normal teeth, are radiopaque, with central radiolucency in the part of the pulp cavity projection [2]. In both cases, no ectopic teeth were visible in a routine laryngological study; it was possible only in computed tomography images. Differential diagnosis of ectopic teeth should to include radiopaque foreign bodies, rhyolites, inflammatory lesions secondary to syphilis, tuberculosis or fungal lesions with calcifications, benign tumors, including hemangiomas, osteomas, calcified polyps, enchondromas, dermoid cysts and

malignant tumors such as chondrosarcoma and osteosarcoma. However, computed tomography allows confirming the presence of ectopic tooth [2].

Ectopic teeth may appear anywhere in the maxillofacial region as well as in other parts of the body. The most common sites are palate (case 2) and maxillary sinuses (case 1) due to their anatomic proximity to the dental alveoli. The most common location of ectopic teeth is the upper incisor area, known as mesiodens. They have an atypical crown and may be in vertical, horizontal or inverted position. They can grow and appear on the palate as extra teeth or grow in the nasal cavity [3]. The literature also includes cases of bilateral ectopic teeth [4]. Ectopic teeth appear in the nasal cavity, ethmoid sinuses, orbits, in the mandible, on the skin of the face and as part of ovarian teratomas, testes, mediastinal front and in the sacrum very rarely. Teeth that appear outside dental alveoli most frequently are incisors, canines, and premolars [5]. The causes of ectopic teeth formation are any abnormal tissue interactions during odontogenesis. Increased incidence of ectopic teeth has been observed in various types of congenital malformations, including cleidocranial dysplasia, Gardner's syndrome, oral-facial-digital syndromes and in patients with cleft lip and palate. Ectopic teeth may additionally appear due to injuries of the maxillofacial region in childhood during dislocation of tooth buds [5,6].

Presence of ectopic teeth may be asymptomatic or cause certain conditions, including recurrent nasal and sinus infections, head and face pain, nasal obstruction, bleeding and foul-smelling rhinorrhea, nasal deformity or nasolacrimal duct obstruction [3].

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According to some authors, the just only presence of ectopic tooth is an indication for its removal to avoid future complications [7]. In the other side, there is a watchful-and-waiting strategy if it is asymptomatic [5]. In both cases, patients complained of symptoms associated with the presence of ectopic teeth, therefore surgical intervention was necessary. The most common classic surgical techniques for extraction include percutaneous and palatal approach, depending on the location. In many cases, endoscopic transnasal access is the best solution due to good illumination, clear visualization, and precise dissection. In addition, endoscopic methods reduce postoperative morbidity and shorten the period of hospitalization [7]. In the described cases, endoscopic procedures were effective, and no additional methods were required. Neighboring structures were not damaged during surgery and extraction, and the postoperative period proceeded without complications.

Untreated ectopic teeth of the maxillary sinus may lead to form of a cyst growing around tooth lead to skin or oral cavity fistula formation [5]. However, ectopic teeth may cause nasal septum deviation, nasal septum abscesses and fistula to the oral cavity [7].

CONCLUSION

The ectopic teeth are not a common problem in laryngological practice, however, they can lead to unpleasure symptoms and rhinosinusitis. Endoscopic sinus surgery is a gold standard in ectopic teeth treatment.

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Corresponding author: Paulina Kołodziejczyk; Department of Otolaryngology, Medical University of Warsaw, Poland;
e-mail: kolodziejczyk.paulina11.02@gmail.com

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