Ectopic third molar as a cause of sinusitis

Terceiro molar ectópico como causa de sinusite

Ectópico tercer molar como una causa de la sinusitis

Lira Marcela Monti1
Josué Gomes de Souza2
Ana Maria Pires Soubhia3
Elerson Gaetti Jardim Junior4

1 MSD, School of Dentistry of Araçatuba/UNESP, Department of Pathology and Clinical Propedeutics
2 Professor, Oral and Maxillofacial Surgery – Fundecto – USP
3 Adjunct Professor - School of Dentistry of Araçatuba/UNESP, Department of Pathology and Clinical Propedeutics
4 Full Professor - School of Dentistry of Araçatuba/UNESP, Department of Pathology and Clinical Propedeutics

INTRODUCTION

Ectopic third molar teeth are those that are impacted in unusual positions, or that have been displaced and are at a distance from their normal anatomic location. Ectopic eruption of a tooth within the oral cavity is common, but rare in other sites. Ectopic eruption can be associated with developmental disturbances, pathologic processes or iatrogenic activity. Male, 19-years old, with an upper left ectopic third molar located in the maxillary sinus-infraorbital region. The patient reported a bad taste and recurrent sinusitis that had been resistant to treatment. Surgical excision was carried out of the third molar tooth using the Caldwell-Luc approach.

Keywords: Sinusitis; Third molar; Pathology, Infraorbital region.

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radiographic and tomographic aspects of a rare intra-
sinusal third molar, and highlight its role as a cause of
recurrent sinusitis.

CASE REPORT
A 19-year old male patient was seen at the radiology
clinic at the particular dental office for preoperative
radiographic evaluation of third molars. The patient
reported no pain but a bad taste and recurrent sinusitis.
No abnormality was observed during intraoral and
extraoral examinations. Upper left third molar was
missing and there was no history of any previous
extraction. Panoramic radiograph revealed
superimposition of the upper left third molar and the
maxillary sinus (Figure 1). The tooth presented a
complete crown and incomplete root formation.
Computed tomography scans were taken for a better
evaluation. On the axial (Figure 2) and coronal (Figure
3) sections, the upper left third molar was observed
within the maxillary sinus. A hyperdense area was
observed, with partial sinus obliteration in left and
right maxillary sinus, consistent with mucous material,
and the right nasal fossa obliteration. The patient
subsequently underwent removal of the ectopic tooth
via a Caldwell-Luc procedure. The patient was referred
to the otorhinolaryngologist, for chronic sinusitis and
nasal obliteration treatment. The framework of
recurrent sinusitis resolved after surgical intervention
for removal of tooth.

DISCUSSION
Ectopic eruption may occur as a result of distinct
processes or it may be idiopathic. The most common
etiologic of dental ectopic eruption resides on
disturbance in tooth developmental process: since
odontogenesis is complex, abnormal tissue interactions
between the oral epithelium and the underlying
mesenchymal tissue during development may
potentially result in ectopic tooth development and
eruption. In some patients, this ectopic eruption may be
related to a pathological process. It is believed that the
displacement of tooth buds by the expansion of
progressively growing dentigerous cysts results in the
displacement of the tooth to other areas. Iatrogenic
activity: During the extraction of the third molar, an
iatrogenic displacement into the maxillary antrum can
occur. Ectopic teeth located within the maxillary
sinus may be asymptomatic. In such cases, they are
only found in routine examinations. Headache,
sinusitis and nasal obstruction are some of the
associated symptoms. In the present case, the patient
developed chronic sinusitis. Computed tomography is
the most appropriate method to visualize impacted
teeth. It shows the relationship between teeth and
adjacent structures with high-quality sectional images.
Cone beam computed tomography has become a
widespread imaging method in dentistry, since it
provides clear images of highly contrasted structures
using less radiation than traditional fan beam computed
tomography systems. In the present study,
tomographic images were of great importance for the
diagnosis of the intra-sinusal third molar. The location
of an upper third molar within the maxillary sinus may
be associated with the development of mucocele. In
this study, the patient presented a hyperdense area
associated with the tooth, compatible with mucous
tissue. Surgical removal should be considered when
intra-sinusal third molars are symptomatic or
associated with cysts. The traditional approach is the
Caldwell- Luc procedure, in which an opening is made
into the maxillary sinus. Alternatively, transnasal
endoscopy, another approach with lower morbidity,
can also be used. The need for surgical intervention
or removal of a non-erupted third molar should be
analyzed for each individual patient. In this study,
surgical intervention was recommended due to the
presence of symptoms. In addition, the dental and
periodontal conditions of the patient must be also evaluated in order to prevent dissemination of anaerobic infections in maxillary sinus during or soon after surgery.

Figure 1. Panoramic radiograph revealed superimposition of the left upper third molar and the maxillary sinus

Figure 2. Computed tomography, the axial section

Figure 3. Computed tomography, the coronal section
Since most common pathogens are commonly found in subgingival environment, drugs active against anaerobes and Gram-negative microorganisms could be selected, such as metronidazole and clindamycin. Azithromycin is also active on most Gram-negative and positive oral pathogens.

REFERENCES
