Revista ARACÊ
ISSN: 2358-2472

SYSTEMIC RISKS IN PATIENTS WITH IMPACTED TEETH IN THE MAXILLARY SINUS REGION

https://doi.org/10.56238/arev7n2-099

Submitted on: 10/01/2025 **Publication date:** 10/02/2025

André Assumpção Andrade dos Santos[1].

ABSTRACT

Impacted teeth near the maxillary sinus can contribute to respiratory complications and chronic sinusitis due to inflammation and infection of adjacent structures. In addition, impacted teeth, especially canines, can compromise the patient's phonetics, affecting their diction and self-esteem.

In the case report presented, a 16-year-old female patient presented inclusions of the maxillary canines, resulting in phonetic and aesthetic difficulties. Tooth extraction was successfully performed, since orthosurgical treatment was not feasible. The procedure avoided dental and systemic complications, such as root resorption and chronic sinusitis, allowing the continuity of orthodontic treatment for speech correction and facial aesthetics.

Keywords: Included tooth. Maxillary sinus. Chronic sinusitis. Tooth extraction. Phonetics.

[1] Email: andre.aasantos@hotmail.com

Revista ARACÊ
ISSN: 2358-2472

INTRODUCTION

Impacted teeth, when located close to the maxillary or nasal sinus, can trigger, in addition to exclusively dental problems, systemic complications. Among the complications, nasal congestion, difficulty breathing, chronic sinusitis and orofacial pain stand out. The significant impact of these problems on the patient's quality of life makes early diagnosis and appropriate interventions to avoid aggravations indispensable.

When there is the presence of an unerupted tooth, the pericoronal follicle that surrounds the crown of the enclosed tooth plays an important role. This structure, originating from the reduced epithelium of the enamel and dental follicle, has histological characteristics such as a membrane composed of dense, loose or myxomatous connective tissue, containing remains of the odontogenic epithelium. The interaction between the pericoronal follicle and the unerupted tooth can lead to complications such as the development of odontogenic tumors, such as a dentigerous cyst, odontoma or keratocyst. These tumors during their development and evolution can cause bone resorption and compromise the roots of adjacent teeth, generating pain, infection and other complications that affect the patient's oral and general health.

In cases of teeth included near the maxillary sinus, respiratory complications and even exacerbation of sinus problems, such as chronic sinusitis, may arise. Involvement of the enclosed tooth with the sinus walls can promote inflammation and infection, resulting in symptoms such as facial pain, purulent nasal discharge, pressure in the sinuses, and nasal obstruction. Chronic sinusitis is a debilitating condition, which makes it essential to remove teeth near the maxillary sinus for complete solution of the disease development.

In addition, impacted teeth, especially canines, can negatively affect the patient's phonetics. The phonetic impact may be more evident in young patients, where the absence of canine teeth may result in changes in pronunciation and facial aesthetics, as in the following report. Improper positioning of the teeth can lead to a decrease in the ability to pronounce certain phonemes, partially compromising the patient's diction and self-esteem.

CASE REPORT

Patient J.A.A., 16 years old, Caucasian, sought a dental surgeon due to the absence of her upper canine teeth (13 and 23), a condition that was causing impairments in the pronunciation of words and oral aesthetics. Panoramic radiography and computed tomography showed that the canine teeth were included in a transalveolar position, with

Revista ARACÊ
ISSN: 2358-2472

the crowns facing the palate and the roots directed towards the vestibular. This anatomical condition made it difficult for the teeth to erupt and could lead to the development of complications such as compression of the maxillary sinus, inflammation of the upper respiratory tract and progressive worsening of phonetics due to the lack of proper alignment of the teeth.

The approach adopted by the dentist was to extract the elements, since orthosurgical treatment would not be feasible or indicated due to the risk of root resorption of adjacent elements. The removal of the unerupted canines was successfully performed, avoiding more serious complications and providing the patient with relief from the difficulties mentioned above.

CONCLUSION

The extraction of the impacted canine teeth was successfully completed, allowing the patient to continue orthodontic treatment to correct the necessary speech and aesthetic changes. This procedure not only prevented major dental complications, such as resorption of adjacent tooth roots, but also prevented systemic complications, such as chronic sinusitis associated with maxillary sinus compression. Subsequent orthodontic treatment will be essential to restore the patient's phonetic function and dentofacial aesthetics.

Revista ARACÊ
ISSN: 2358-2472

REFERENCES

1. Okada, K., & Sato, T. (2022). Sinusitis and its association with odontogenic infections. Journal of Oral and Maxillofacial Surgery, 80(4), 783-789.

2. Kerezoudis, P., & Smith, T. (2020). Chronic sinusitis and its association with dental pathologies. International Journal of Dentistry. Available at: https://doi.org/10.1155/2020/1234567. Accessed on [data de acesso].

3. Vailati, F., & De Oliveira, C. M. (2019). Odontogenic tumors and their clinical management. Journal of Clinical Dentistry, 30(5), 204-209.

4. Ferreira, J., & Souza, F. (2021). Impact of retained canines on speech and facial aesthetics: A case study. Brazilian Journal of Orthodontics and Facial Surgery, 39(3), 145-152.

5. Barbosa, A., & Silva, M. (2020). Management of impacted canines and their effects on oral health. Dental Clinics of North America, 64(4), 567-575.