

# "MAXILLARY SINUS MYCETOMA IN IMMUNOCOMPROMISED PATIENT"

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**ABSTRACT:** The maxillary antrum is the most voluminous paranasal sinus in which great variety of diseases could develop. Among them there are inflammatory, infectious, cystic, tumoral, and establishment of foreign bodies.

The following is a case report of a patient with a history of leukemia and rheumatoid arthritis from whom unilateral intrasinus mycetoma simulating foreign body was excised.

**INTRODUCTION:** The maxillary antrum constitutes one of the four paranasal sinuses of the craniofacial structure. In the confinement of these cavities, a wide variety of pathological entities could be located. Among these, inflammatory, cystic, tumoral, and presence of foreign bodies.

Foreign bodies, defined as any element outside their expected location, represent a low percentage of the sinus etiology. Clinical presentation is variable and depends on its nature and on the time elapsed since its introduction. Although, some patients may manifest an unilateral maxillary sinusopathy, others present asymptomatic and are diagnosed by imaging findings.

According to the bibliography 91% of sinusal foreign bodies are of dental origin, mainly related to iatrogenesis. The rest is associated to propelled residues of facial trauma, followed by entities whose characteristics are unclear, and in order to get a certainty diagnose requires an histopathological study, such as in cases of anthrolytes and Mycetomas with atypical presentations.

Mycetomas are heterogeneous mycotic conglomerates detected in imaging studies with metallic density due to the deposit of salts that occurs in their structure.

Within intrasinus mycoses, two groups are recognized: invasive and non-invasive. The last ones are subdivided into a diffuse form and a localized one, where mycetomas could be found.

This localized non-invasive form is characteristic of immunocompetent patients, while on the contrary, the invasive ones are associated with immunocompromised patients, which are in many cases fulminant.

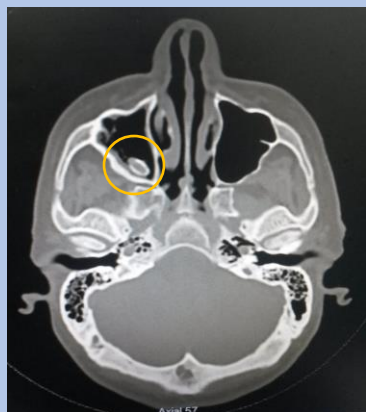
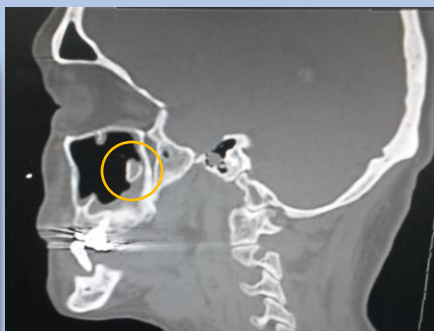
**CASE REPORT:** 51-year-old female patient with history of large granular granulocytic leukemia and rheumatoid arthritis, who was admitted for presenting severe febrile neutropenic symptoms.

In search of a causal focus, a pan-CT scan was performed in which a foreign body was detected in the posterior sector of the right maxillary sinus, approximately 1cm in diameter, ovoid, with an incomplete radiopaque border and a radiolucent center. Underlying mucosa of hyperplastic character. Contralateral sinus without pathological signs.

Otorhinolaryngology Department suggests consultation with ours under suspicious of an impaled tooth.

Removal of the foreign body is carried out under general anesthesia with oro-tracheal intubation by means of a surgical Cadwell-Luc approach in the anterior wall of the maxillary sinus. The intraoperative sample was of tomographic predicted dimensions, grayish-white color, and soft friable consistency. Manual curettage of the cavity and lavages were performed.

Surgical specimen microbiological study result was negative, and anatomopathology reports "structure compatible with hiphae". No mucosal infiltration detected.



**DISCUSSION:** Within intrasinus foreign bodies only 9% are not related to dental elements, where the most frequent is the introduction of exogenous elements secondary to maxillofacial trauma. In second place, anthrolytes are recognized as non-odontogenic occupant of the antrum. In image studies these can be confused with mycetomas.

Mycetoma represents a localized form of intrasinus mycosis, this clinical presentation is characteristic of patients with healthy immunosystems that allow them to focus the infection. Clinically manifestations includes facial pain, rhinorrhea, nasal obstruction, cacosmia.

Therefore, the case presented widely differ from what has been described in the literature, not only because of the predominant incidence of odontogenic etiology, fact that added to the imaging characteristics would indicate that this entity could be a tooth, root or tissue of dental origin. But taking under consideration that the patient in question has a severely compromised immune system, developing an atypical leukemic condition associated with rheumatoid arthritis, and even so manages to focus the infection and avoid deep dissemination.

Furthermore, we asked ourselves if due to the underlying pathology, an invasive and non-invasive form of mycosis could coexist, which was dismissed due to the lack of infiltration of the examined mucosa, also to a negative blood culture, and last but not least, since after the removal of the sample the symptoms reversed.

**CONCLUSION:** It is possible, although infrequent, the formation of fungal balls not associated with deep mycosis in immunocompromised patients.