

CASE REPORT

Gossypiboma Mimicking Maxillary Sinusitis: A Unique Case Report

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ABSTRACT

Background: Gossypiboma (foreign body granuloma) is a rare clinical presentation, especially in the maxillary sinus, and may be seen after transnasal procedures but is an uncommon foreign body in the maxillary sinus after dental procedures.

Case description: A 24-year-old female presented with symptoms suggestive of sinonasal disease. Intraoperatively, a foreign body composed of a cotton ball was incidentally found in the left maxillary sinus and intraoperative findings were histopathologically compatible with foreign body reaction around the cotton ball.

Conclusion: Gossypibomas are rare and hard to diagnose, and usually asymptomatic. In chronic cases, it does not reveal any specific radiological or clinical signs for diagnosis but must be considered in patients with a history of dental procedures.

Clinical significance: Although imaging is suggestive of sinusitis, a localized disease with a history of dental procedures, should raise a high index of suspicion to rule out foreign body granuloma, for desired clinical and surgical outcomes.

Keywords: Case report, Gossypiboma, Foreign body, Maxillary sinus.

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INTRODUCTION

Gossypiboma is an inflammatory reaction to a foreign body, composed of a cotton matrix left behind during the surgery. It is derived from the Latin word "Gossypium," the genus of the cotton plant, and "boma," a Swahili word meaning "place of concealment." This term is usually applied to the inflammatory process resulting from a foreign body.¹ Gossypiboma has been labeled in prior literature as textiloma, cottonoid, and gauzoma. It is a rare condition caused mainly by iatrogenic factors.² This study aims to report a case of gossypiboma in the maxillary sinus, 5–6 months of dental extraction.

CASE DESCRIPTION

A 24-year-old female came to us with the complaints of left nasal obstruction for 4–5 months relieved partially with medications with no history of headache/nasal discharge or trauma. Previously she underwent a left upper premolar tooth extraction around 6 months back.

Nose examination revealed left-sided congested mucosa with mucopurulent discharge in the floor and no significant peripheral nervous system (PNS) tenderness.

She was treated for acute sinusitis for a few weeks, but symptoms did not improve. A plain CT PNS was subsequently performed which showed soft tissue opacity in the entire left maxillary sinus, anterior ethmoids, and part of the nasal cavity, a bony defect, seen in the floor of the left maxillary sinus, probably due to dental extraction (Fig. 1). Based on imaging and clinical signs a differential diagnosis of chronic bacterial sinusitis, antrochoanal polyp/nasal mass was considered. Surgical treatment for the same was planned.

Endoscopic surgical exploration under general anesthesia revealed inflammatory edematous mucosa with increased

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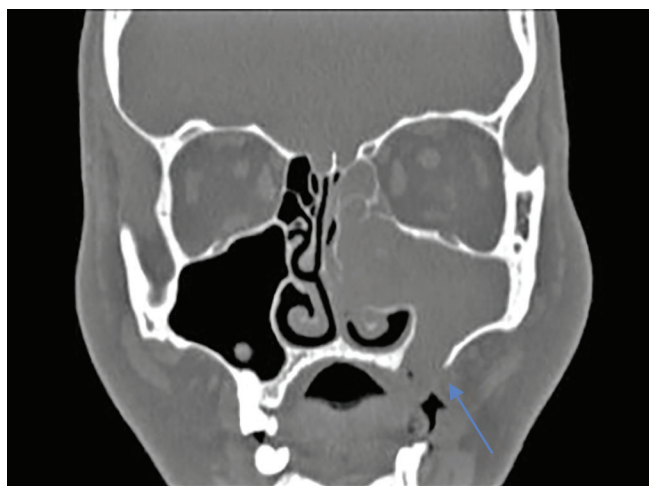


Fig. 1: Plain CT PNS coronal view showing defect in the left maxillary sinus floor with a soft tissue opacity in the entire maxillary sinus and left nasal cavity



Fig. 2: Cotton ball, surrounded by pus, blood, and granulation tissue incidentally found intraoperatively

vascularity in the nasal cavity and the middle meatus with granulation tissue and thick secretions on the left side. There was even polypoidal mucosa in the left maxillary and anterior ethmoids with blockage of the left frontal recess. During the process of removing the diseased mucosa from the left anterior ethmoids, a 2 cm × 2 cm cotton ball was found incidentally in the left osteomeatal complex behind the uncinata, surrounded by pus, and granulation tissue (Fig. 2).

The entire granulation and edematous tissue were cleared and sent for histopathological examination (HPE), which revealed inflammatory tissue.

Using an angled scope, the floor of the maxillary sinus, visualized, and no mucosal defect was seen.

The postoperative period was uneventful. The patient was discharged the next day with oral antibiotics, a nonsteroidal anti-inflammatory, and decongestant nasal spray and nasal washes. One-month, postsurgery endoscopic examination revealed healthy nasal mucosa, and the patient was asymptomatic.

DISCUSSION

The formation of gossypiboma can be either due to inadvertent use of cotton or other foreign bodies by the patient or rarely it can also be due to postsurgical iatrogenic causes. Foreign bodies in the nose and PNS are usually small in size and relatively inert in nature, thus,

depicting a very limited inflammatory response.³ Retained foreign bodies for a long period may cause distressing and persistent symptoms of two types:² (A) An aseptic fibrinous response causing adhesions or encapsulation, leading to granuloma formation. (B) Exudative type, resulting in the formation of an abscess, with or without superinfection with bacteria.²

Considering all the previous literature, the longest time, the gauze was retained in the oral region was for 8 years,⁴ whereas in our case, it was for 5–6 months.

In the present case, the presence of purulent drainage with chronic inflammation was identified, thus indicating the exudative type, for which the surgical removal of the granulation tissue and the foreign body was the treatment of choice, with a good prognosis.

CONCLUSION

In the nose, maxillary sinus, and oral region, there are many pathological processes that are similar clinically to those caused by gossypiboma. Foreign bodies in the maxillary sinus often have a dental origin caused by previous procedures, or secondary to an oroantral fistula.

Gossypibomas are usually rare and are hard to diagnose, and often asymptomatic, especially in chronic cases, which do not reveal any specific clinical or radiological signs for differential diagnosis. Literature shows that the prognosis of such patients is generally quite good when the causative factor is removed.

We conclude that in patients with a prior history of surgical intervention, the presence of foreign bodies should be in the differential diagnosis.

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