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CASE REPORT

Fungal Septal Abscess with Maxillary Sinus Mycetoma in an immunocompetent patient: A rare co-existing infection.

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Abstract

Background: Nasal septal abscess that are caused by fungal have been previously reported in the medical literature; however, they seem to be less commonly seen in immunocompetent hosts.

Methodology/Principal: We report a case non-traumatic, spontaneous of fungal septal abscess with coexisting fungal sinusitis in a healthy patient.

Conclusions: Although rare, fungal septal abscess in an immunocompetent patient can occur and this case report hope to alert the medical society about this uncommon disease.

Keywords: Fungal, nasal septum, abscess, immunocompetent, sinusitis

1 | INTRODUCTION

Nasal septum abscess is a collection of pus between the cartilage or bony septum and the mucoperichondrium or mucoperiosteum. The accumulation of pus between the cartilage and perichondrium can cause ischemia and necrosis of the cartilage and this will lead to septal cartilage destruction, saddle nose, functional dysfunction, and cosmetic deformity. On top of that, intracranial extension from nasal septum abscess is associated with high risk of morbidity and mortality. Therefore, early diagnosis and quick treatment should be provided to avoid this lethal complication and permanent destructive deformity before irreversible condition arise. This case report presents an uncommon case of spontaneous fungal septal abscess in an otherwise immunocompetent host.

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2 | CASE REPORT

A 32-year-old female presented with facial pain associated with nasal obstruction for 4 days. She had been taking oral antibiotic for the same duration, but her symptoms persisted. There were no fever, visual disturbance, and headache. She had no risk factors to suggest that she may be immunocompromised. No history of nasal trauma, surgery, or dental procedure. On examination, the anterior part of the nasal septum were swollen bilaterally (Figure 1). Nasal endoscopy revealed a mucopurulent discharge in the left middle meatus.

FIGURE 1: *show edbulging of the nasal septum bilaterally*

A complete blood cell count showed leucocytosis, with a white blood cell count of 14,3 x $10^{\wedge 3}$/L. All other laboratory values were within normal limits. Random blood sugar examination was within normal range. Computed tomography scan of paranasal sinuses showed peripherally enhancing collection at cartilaginous part of nasal septum measuring about 2.1 x 1.0 x 2.3 cm. There was mucosal thickening in the left maxillary sinus with mucus/ fluid retention seen within maxillary sinus. There was also a defect seen over the medial wall of the maxillary sinus (Figure 2).

Incision and drainage of the septal abscess with left middle meatal antrostomy was performed. About 2 cc pus drained from the septum and left fungal ball with mucopus seen within left maxillary sinus. She was symptoms free after a one-week course of intravenous antibiotic with a normal endoscopic

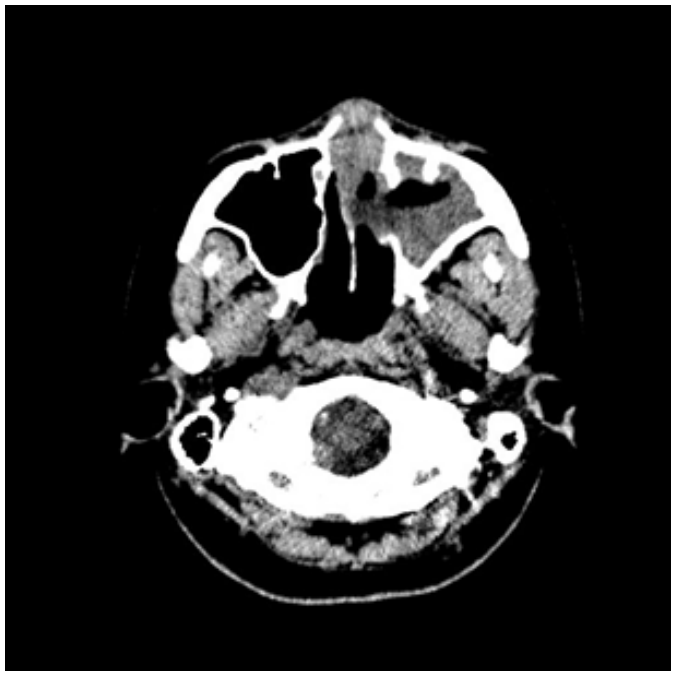

FIGURE 2: *Computed tomography scan of para nasalsinuses showed nasal septal abscess (short arrow) with opacified left maxillary sinusand left medial wall defect (long arrow).*

finding of nasal septum and left maxillary sinus mucosa. Histopathological examination of the fungal ball showed fungal colonies and hyphae (Figure 3).

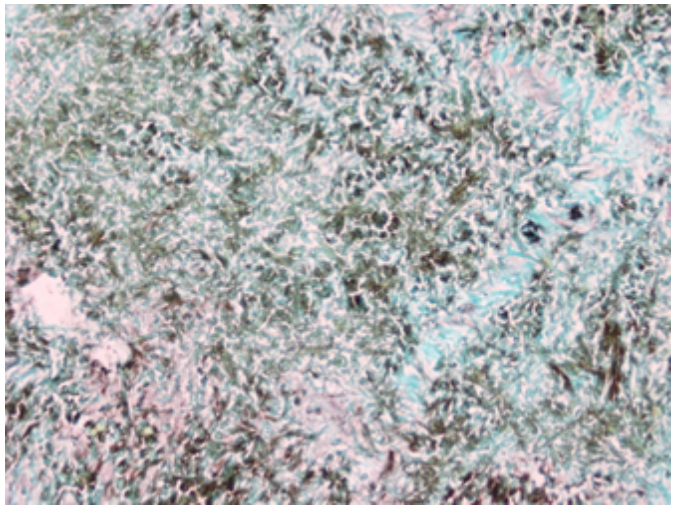

FIGURE 3: *Histopathologicalexamination showed fungal hyphae*

3 | DISCUSSION

Sinonasal fungal infection can be destructive entities that are typically seen immunocompromised patients [1]and very few cases of fungal septal abscess in immunocompetent patient host have been reported. Nasal septal abscess most commonly caused by a hematoma following trauma [2] [3]. Other etiology factors include nasal surgery, nasal furuncle, dental abscess, or sinusitis [2]. Nasal septal abscess secondary to acute sinusitis is extremely rare and only limited number has been reported [3].

This patient is immunocompetent and had no history of trauma to the nasal septum or previous nasal surgery. Non-traumatic spontaneous nasal septal abscess has been reported mainly in immunocompromised patients. There have been only two reports of non-traumatic spontaneous nasal septal abscess in immunocompetent adults. In septal abscess with coexisting sinusitis, they believe that possible mechanism is from direct subperiosteal extension from the anterior surface of the sphenoid bone, extending anteriorly over the vomer and perpendicular plate of the ethmoid to the subperichondrial surface of the quadrilateral cartilage [3]. Other possible mechanisms include direct spread via a bony fissure, through congenital bony abnormalities or via thrombophlebitis.

Nasal septal abscess is a surgical emergency that requires prompt attention because it can cause a significant severe functional or cosmetic disturbance [2] [4]and as well as serious life-threatening complications such as sepsis, cavernous sinus thrombosis, meningitis and brain abscess [5].

urgical drainage of nasal septal abscess is required . (4) Bilateral drainage is indicated when the abscess is bilateral with an intact septal cartilage, so that cartilage still exists between the collections [4]. A wick is placed in the incision, and the mucoperichondrium is replaced against the cartilage by supportive intranasal packing [4]. Bacterial and fungal cultures of the specimen should be obtained, and sensitivities performed to guide treatment [1]. Empiric antibiotic or antifungal treatment should be started while waiting for the results [6]. The patient did not received antifungal in view of she has no symptoms and nasoendoscopic finding showed septum swelling has resolved by the time the result of the culture came out.

This patient presented with facial pain and nasal obstruction, symptoms in keeping with acute sinusitis, a condition that commonly treated in the community with antibiotics and decongestants, to good effect. Failure to respond to the treatment proved to be due to the uncommon sequel of nasal septal abscess.

In conclusion, although rare, fungal septal abscess in an immunocompetent patient can occur and this case report hope to alert the medical society about this uncommon disease. This case also highlights the importance of a detailed history and proper examination so that unnecessary complication can be avoided.

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