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Case Report

Rhinosinusal Mucormycosis in a Post COVID-19 Patient: A Case Report

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Abstract

Rhinosinusal mucormycosis is a rare, potentially fatal manifestation with insidious, unspecific clinical manifestations and poor clinical course. In recent months, cases associated with Sars CoV-2 infection have been reported in previously healthy patients. Early surgical treatment has a marked influence on the prognosis.

Keywords: Mucormycosis; Covid-19; Oropharynx; Fungal Rhinosinusitis

Introduction

Mucormycosis is a rare but potentially fatal infection, caused by a group of related molds from the order Mucorales, the most common specie being *Rhizopus* [1-3]. In South America 143 cases have been reported between 1960 and 2018, increasing their incidence in recent decades [4]. Generally, occurs most commonly in immunosuppressed patients (HIV, transplant recipients, immunosuppressive therapies, Diabetes Mellitus) [5,6]. It is manifested by a variety of different clinical locations, among them rhinopharyngeal is the most common [1,5,6]. This year, worldwide cases of this infection associated with covid-19 have been published in patients with a previous susceptibility and in healthy patients [7,8]. The report of this case aims to describe the second case of mucormycosis associated with a covid-19 infection in Uruguay.

Case Report

A 52 years old woman, former smoker, with no significant past medical history. Admitted in the ICU for COVID 19. 7 days after discharge, patient was presented to the emergency department with an erythematous plaque at the level of the hard palate, painless, without odynophagia or dysphagia. Associated with mucopurulent rhinorrhea, intermittent headaches and bilateral conjunctivitis, without fever. She received 14 days of antibiotic therapy with a poor response that evolved to a central ulcer of approximately 2.5 cm in diameter, with a necrotic-looking background, yellowish-white in color, with brown areas and bone exposure in the center, irregular borders and whitish areas of fibrin (Figure 1). The patient was evaluated by ophthalmology, visual acuity and ocular motility without alterations. A facial Massif Tomography was requested. Occupation of the frontal, sphenoid, ethmoid and maxillary sinuses was observed with the presence of gas bubbles. Bony involvement at the level of the lower wall of the left orbit (Figure 2). Normal chest and skull tomography. Rhinoscopy with a 0 optics is performed, biopsies are taken for mycological and bacteriological study. The diagnosis of mucormycosis is confirmed. Endoscopic rhinosinusal surgery is performed for scabbing and resection of necrotic tissues. Important lesions on the orbital floor and the medial and posterior wall of the maxillary sinus. Absence of nasal septum cartilage and left intersinusal wall. The mucosa of the orbital floor and posterior wall of the maxillary sinus was completely resected. Periorbit without lesions. Eyeball is preserved. The patient was started on amphotericin B deoxycholate at a dose of 75 mg/day with an excel-

lent response. Scabbing is performed in successive controls without showing necrotic tissues.

Figure 1: Central ulcer of approximately 2.5 cm in diameter, with a necrotic-looking background, yellowish-white in color, with brown areas and bone exposure in the center, irregular borders and whitish areas of fibrin.

Figure 2: Occupation of the frontal, sphenoid, ethmoid and maxillary sinuses was observed with the presence of gas bubbles. Bony involvement at the level of the lower wall of the left orbit.

Discussion

The case of a chronic pansinusitis of more than a month of evolution, with indolent and progressive presentation, with a delay in diagnosis, probably due to its presence in a previously healthy patient and because it is one of the first cases associated with covid-19, is described.

The clinical manifestations are explained by the adherence to endothelial cells and the permanence of the spores on the tissue with their development in situ, with rapid growth of the filamentous structures that join the blood vessels, penetrate and obstruct them, causing thrombosis, which causes areas of necrosis. This fungus can cause injury even when it has already died [9].

Early diagnosis is decisive for the patient's prognosis and reducing extensive surgical debridements that compromise vital functions [2,5,6]. Computed tomography is useful mainly to determine the anatomical involvement of this infection, but it can also show specific findings, although not very sensitive for diagnosis, such as bone erosion that this patient presents [10].

Performing endoscopy with biopsies of suspicious lesions is essential to confirm the diagnosis, since this mycosis always requires histological confirmation.

Treatment is based on four fundamental principles: early diagnosis, rapid-onset medical and surgical treatment, elimination of predisposing factors such as the use of glucocorticoids and extensive surgical debridement of compromised tissues. Identification of the Mucormycosis should not always be expected to start treatment [11,12].

In the absence of treatment, it is associated with high mortality ranging from 40% to 70% depending on the affected site, being higher when the involvement is in the facial center [13].

Conclusion

The clinical suspicion of this infection in patients who have suffered COVID 19 is important in order to make the early diagnosis and early surgical medical treatment that improves the prognosis of the patients.

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