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Nasal septum ulcer as an isolated manifestation of histoplasmosis

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ABSTRACT

Histoplasmosis is an infection caused by the dimorphic fungus *Histoplasma capsulatum*, which is saprophyte of contaminated soil. In the immunocompetent host, the symptoms of histoplasmosis tend to be mild or even non-existent. In immunocompromised patients, the manifestations may be more severe and the disease manifests itself in a disseminated form, with high mortality rates. Isolated mucosal lesions are infrequent and the purpose of this report is to describe an unusual case of nasal septum ulcer as an isolated clinical manifestation of the disease.

Introduction

Histoplasmosis is an infection caused by *Histoplasma capsulatum*, a dimorphic fungus, saprophyte of contaminated soil. The disease is endemic in the northwestern and central regions of the USA and it is also present in Latin America and Africa, and less so Asia, India and Australia. The infection occurs after inhaling microspores from the soil, and it can lead to many forms of clinical presentation. The majority of primary infections, in the immunocompetent host, are subclinical or manifest as an influenza-like illness, usually self-limited. Disseminated histoplasmosis is rare and occurs mainly in immunocompromised patients, such as solid-organ transplant recipients and HIV-positive patients. It is estimated that the disseminated form is related to HIV infection in 70–90% of cases in countries where the disease is endemic. Isolated lesions of mucous membranes are infrequent [1].

The purpose of this report is to describe an unusual case of histoplasmosis, presenting a nasal septum ulcer as an isolated clinical manifestation of the disease.

Case presentation

The patient, a 58 years old female from the interior of the state of São Paulo, presented with an ulcerated and infiltrative lesion in the anterior septal region of the left nostril, progressive over two months associated with a sensation of local burning, the formation of crusts and yellowish rhinorrhea (Fig. 1). The patient had a renal transplant 4 years before, related to polycystic kidney disease and was receiving tacrolimus and prednisone 10 mg/daily. She denied direct contact with soil or birds. Pathologic examination of a biopsy showed a chronic granulomatous inflammatory process in the nasal mucosa with the presence of numerous structures suggestive of *Histoplasma* sp., Grocott and PAS staining were positive. Chest X-ray showed no abnormalities.

The patient was referred to a infectious disease service where treatment with fluconazole 200 mg/day was initiated. After one month of treatment, the medication was discontinued due to hepatic and renal function worsening. Even before the beginning of the medication, the kidneys already showed signs of dysfunction, then probably fluconazole may have acted only as a complicating factor. The improvement of the laboratory parameters allowed reinstitution of therapy; itraconazole was prescribed and the medical team maintained a regular monitoring of renal and hepatic functions. The patient evolved with progressive worsening of renal function, requiring hemodialysis. She underwent treatment with itraconazole for one year, presenting complete improvement of the lesion in the nasal mucosa, remaining with no evidence of pulmonary or disseminated disease.

Discussion

In order to evaluate ulcer infiltrative lesions in the nasal mucosa, a wide variety of differential diagnoses should be considered, such as Wegner's granulomatosis, sarcoidosis, tuberculosis, paracoccidioidomycosis, leishmaniasis besides neoplastic causes as well as histoplasmosis [2]. Mucosal lesions associated with histoplasmosis are uncommon, being rare the isolated occurrence in the nasal mucosa. In 2006 Motta et al reported the case of a renal transplanted patient with ulcers in the nasal and oral mucosa as the sole manifestation of histoplasmosis [3]. In 2010

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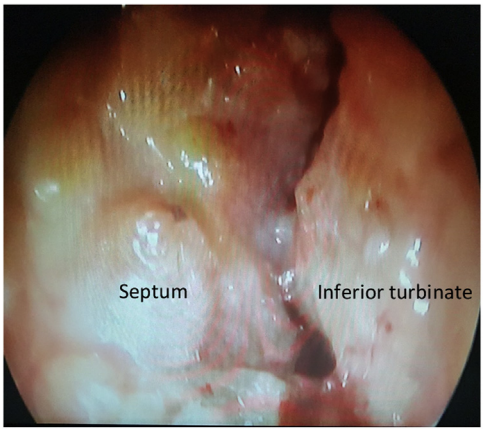

Fig. 1. Image obtained by flexible fibroscopy of the left septal mucosa, compromised by an ulcer-infiltrative lesion.

Oikawa et al. carried out a review of the literature, searching for articles in four different databases, and found only three case reports of histoplasmosis with compromised nasal septum [4]. In 2012 Manzini and Lavinsky-Wolff reported the case of an immunosuppressed patient with lesions of the nasal mucosa caused by the fungus, without pulmonary manifestations [5]. Also in 2012 Jaimes et al reported the case of two patients with perforation of the nasal septum as the first sign of histoplasmosis associated with HIV infection [6].

The diagnosis can be made by histopathological analysis, culture, serologies, the presence of antigens in serum and urine or molecular tests. Chronic use of immunosuppressive drugs can lead to impaired immune system, facilitating the multiplication and dissemination of the microorganism.

The treatment of choice for localized cases is the administration of imidazole antifungals, usually maintained for six months to one year. The medication of choice is itraconazole in mild to moderate cases. Severe cases require hospitalization and amphotericin B is the drug of choice for initial therapy. The use of imidazole antifungals in patients who use immunosuppressants drugs, requires rigorous clinical follow-up. Imidazoles may lead to reduced metabolism and increased serum concentrations of immunosuppressants, causing renal, neurological, and hepatic toxicity [7].

Conclusion

The reported case is an unusual example of isolated septal histoplasmosis, since the patient did not present classical epidemiology or impairment of other organs or systems. The analysis of anatomopathological material, culture and a broad clinical investigation are important for the correct diagnosis and early therapy, considering that immunocompromised patients present a higher risk of progression to the disseminated form of the disease.

Statements

The present work has no funding source related and the authors have no competing interests to declare. The case report was produced according to ethical principles and the required approval.

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