INTRODUCTION

Mucormycosis is the most lethal fungal infection in humans and it is manifested as a quick, progressive and invasive sinusitis. It usually affects immunocompromized patients. Mortality is high, despite early diagnosis.1,2

We hereby present a severe case of a child with rhino-orbital-cerebral mucormycosis; however with a very favorable outcome after aggressive treatment.

CASE PRESENTATION

A 12-year-old female patient started with sudden abdominal pain, polyuria, polydipsia, anorexia and a drop in consciousness level. She was diagnosed with untreated type I diabetes mellitus (diabetic acidosis), with blood sugar of 508 mg/dl upon hospital admission. After one week in the hospital, she started having eyelid ptosis, facial pain, converging strabismus, left side epistaxis and a progressive worsening of her general health.

Skull and paranasal sinuses CT scan and MRI showed a soft tissue mass in the left nasal cavity, invading the ethmoidal, maxillary and cavernous sinuses and the ipsilateral orbit (Figure 1).

An endoscopic-guided tumor biopsy showed mucormycosis. The patient was started in high doses of endovenous amphotericin B liposome for 45 days. There was a mild improvement only. Anterior rhinoscopy showed a large brown-greenish mass occupying the entire left nasal cavity.

We decided to do a nasosinusal exploration. The left nasal cavity was broadened, and the maxillary sinus ostium was open and clear, without any evidence of infection. The maxillary sinus ostium was open and there were no signs of mucormycosis.

The patient was discharged from the hospital in a stable condition and using oral itraconazole. The endoscopic view confirmed disease clearance.

She is currently asymptomatic. Her capillary glucose is strictly controlled. She has nerve palsy of the III and IV cranial nerves on the left, however with good visual acuity and no diplopia.

DISCUSSION

Mucormycosis or zygomycosis is a rare opportunistic disease caused by Mucorales fungi, which belong to the genus Mucor, Rhizopus, Rhizomucor, Absidia and Apophysomyces. The most virulent and frequent species is Rhizopus oryzae, which invades and clogs blood vessels, causing tissue ischemia.4 This disease can manifest itself in different clinical signs and symptoms, and the rhino-orbit-cerebral zygomycosis is the most severe form, manifesting itself usually in cases of diabetes mellitus of difficult control.3

Transmission is presumably through the inhalation pathway.

Many clinical conditions are associated with mucormycosis, but there are only two factors clearly associated with predisposing patients to the disease. The first is metabolic acidosis, and the second is disorders of neutrophils and monocytes.4

As a general rule, mucormycosis treatment is multimodal and includes the use of systemic antifungal drugs, surgical debridement and clinical control of the condition which is predisposing the patient to the disease.3

FINAL REMARKS

Proper Rhino-Orbit-Cerebral Mucormycosis control includes early diagnosis, baseline disease control, treatment with antifungal systemic agents, proper sinus and orbital drainage and excision of the necrotic tissue, besides hyperbaric oxygen therapy.5

REFERENCES


Rhino-orbito-cerebral mucormycosis

Keywords: amphotericin b, child, diabetes mellitus, endoscopy, mucormycosis.