Diagnosis in a case total ophthalmoplegia – where time is life

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ABSTRACT

Rhino-orbito-cerebral mucormycosis is a potentially fatal fungal infection seen in poorly controlled diabetics or immunocompromised patients who can present initially to an ophthalmologist, otorhinolaryngologist or a neurologist. The clinical presentation to an ophthalmologist may be that of painful ophthalmoplegia. The confirmation and further management of the infection requires an interdisciplinary approach. A timely diagnosis and intervention can be life-saving. This article depicts the typical fulminant course and diagnostic evaluation of rhino-orbito-cerebral mucormycosis.

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KEYWORDS

Painful ophthalmoplegia;
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Presentation

A 39 years old female presented with pain and drooping of the left upper eyelid since 15 days. She also complained of double vision for a day following which there was a complete loss of vision in the left eye (LE). She was a diabetic since past 6 years. On

examination her visual acuity in the right eye (RE) was 6/60, N24 and in the LE was no perception of light. Extraocular motility in the RE was full whereas in the LE there was a total ophthalmoplegia with a complete ptosis. Pupillary evaluation of the LE revealed mid dilated pupil, not reacting to light

Figure 1. External photo of the eyes depicting total ophthalmoplegia with a mid-dilated pupil and mild redness in the left eye.

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Figure 2. A contrast enhanced magnetic resonance imaging (MRI) brain and orbit coronal (a,b,c) and axial (d) sections with the arrows pointing to the fungal granuloma in the superior orbital fissure and the cavernous sinus.

Figure 3. Fungal filaments as seen on fluorescence microscopy.

with a relative afferent pupillary defect 4+. The RE pupil was briskly reacting to light (Figure 1). Fundus evaluation revealed a proliferative diabetic retinopathy in both eyes. Cranial nerve examination revealed 2, 3, 4, 5, 6 and 7th cranial nerve palsies on the left side. The magnetic resonance imaging (MRI) brain and orbit with contrast showed a hyperintense lesion

in the left orbital apex, superior orbital fissure and cavernous sinus lesion with involvement of the left optic nerve, extraocular muscles and the seventh nerve (Figure 2) She was referred to an otorhinolaryngologist and the mucosal lesion from left nasal cavity was biopsied which showed plenty of fungal filaments on fluorescence microscopy (Figure 3).

Discussion

Mucormycosis is a fungal infection caused by fungi in the order Mucorales.¹ Rhino-orbito-cerebral mucormycosis is the dreaded diagnosis in diabetics or immunosuppressed patients with rapidly progressing multiple cranial nerve palsies following the orbital symptoms. It is a medical emergency because it may lead to death in few days.² A biopsy from the nasal cavity or the sinuses by an otorhinolaryngologist is essential. Systemic antifungal therapy with high-dose amphotericin B is associated with an overall survival rate of 72%.³ This article depicts a typical fulminant course of the dreaded disease.

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