Teaching Neuro*Image*

MRI findings of rapidly progressive ophthalmoplegia and blindness in mucormycosis

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An 18-year-old woman with poorly controlled insulin-dependent diabetes mellitus had 3 days of worsening nasal discharge, right facial pain and erythema, and headache. Lumbar puncture showed 250 nucleated cells/μL with neutrophil predominance, elevated protein of 81 mg/dL, and normal glucose. She was treated for presumed meningitis, but then rapidly developed right-side symptoms including facial numbness, complete ophthalmoplegia, and efferent pupillary defect, followed by afferent pupillary defect and acute blindness. Funduscopic examination results were unremarkable, suggesting ischemia as a consequence of presumed vascular thrombosis.

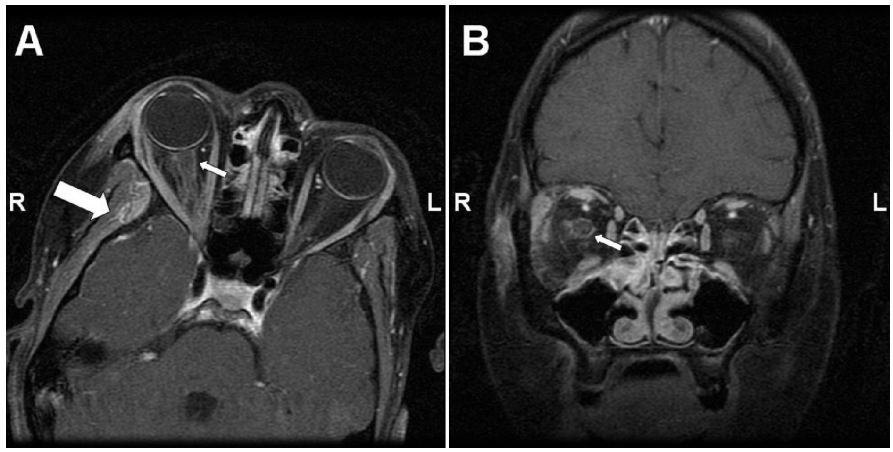

Figure. T1-weighted MR images of the orbits with gadolinium in axial (A) and coronal (B) views. There was abnormal enhancement in the right (R) orbit encasing the optic nerve (small arrow), the periorbital fat, and the right infratemporal musculature (large arrow). There was no imaging abnormality on the left (L).

Imaging was performed (figure). Emergent surgical debridement showed extensive necrosis and mucormycosis. Pathologic studies showed fungal hyphae in the branches of the ophthalmic artery and in the optic nerve perineural sheath without significant optic nerve inflammation. Bacterial orbital cellulitis often spares vision. Rhinocerebral mucormycosis should be suspected in the setting of rapidly progressive ophthalmoplegia and blindness in patients with diabetes.[1]

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