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Management of CNS mucormycosis in the pediatric patient.

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Abstract

Rhinocerebral mucormycosis (RM) is a rare, rapidly progressive disorder caused by fungi from the Mucoraceae family. With extensive central nervous system involvement, this disease is uniformly fatal within weeks. Mucormycosis normally presents in poorly controlled diabetics, intravenous drug abusers and immunocompromised patients. Many have advocated radical surgical resection (i.e. exenteration of the cavernous sinus with carotid sacrifice and en bloc resection) with administration of amphotericin B. We present a case of mucormycosis involving the paranasal sinuses and cranial base in a pediatric patient who experienced long-term survival with a more limited resection. We also present a review of the relevant literature. A 14-year-old diabetic male presented with RM with involvement of the bilateral frontal lobes, right basal ganglia and temporal lobe. Additionally, there was involvement of the sphenoid sinus and right cavernous sinus with extension into the posterior fossa along the course of the trigeminal nerve and encasement with narrowing of the right carotid artery. The patient underwent sinus endoscopy with debridement of necrotic fungal tissue and bone. This was followed by craniotomy with evacuation of bifrontal, right temporal and basal ganglia abscesses in such a way that all abscess cavities communicated. An Ommaya reservoir was placed into the largest cavity. The patient continued to receive intrathecal and intravenous antibiotics as well as hyperbaric oxygen therapy. The patient was clinically and radiographically free of disease 1 year after diagnosis. While invasive RM is generally a fatal disease, this rare disorder can be treated successfully without radical resection, particularly if multimodality treatment options are implemented.

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