

Abstract Title:

Osteomyelitis of the Clivus Secondary to Mucormycosis: A Rare Case Study

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Introduction: Osteomyelitis of the clivus secondary to mucormycosis is a rare infection of the clivus bone due to infiltration by fungi of the genus *Mucor*. Immunocompromised patients and/or those with diabetes mellitus are most at risk of developing this disease.

Case Description: A 63-year-old male patient with hyperglycemia presented with weakness and a fall. Upon admission to the hospital, a right-sided facial droop was observed, and the patient was diagnosed with diabetes mellitus. Computed tomography angiography (CTA) of the head and neck was performed demonstrating advanced sinusitis (Fig. 1). Abnormal gas was seen in several foci in the skull base (Fig. 1) and soft tissues adjacent to the clivus. A fiber optic nasal endoscopy was performed, confirming image invasive sinusitis possibly due to mucormycosis. Pathological findings reported non-septate branching hyphae, indicative of potential mucormycosis from fungal infiltration. The patient was started on amphotericin B but was switched to posaconazole due to concern for pancytopenia. However, repeat CT imaging revealed worsening of sinusitis and the patient began to deteriorate, therefore amphotericin B was restarted. The patient was eventually transferred to undergo endoscopic debridement, which demonstrated *Mucor* on the carotid wall. Unfortunately, due to the high mortality rate of osteomyelitis, the patient decompensated and died, three weeks following the initial CTA finding of mucormycosis.

Discussion: The findings in the patient were atypical for osteomyelitis of the clivus as the bone was intact, whereas it is usually destroyed in other cases. Instead, foci of gas were visualized in abnormal locations and this presence persisted without evidence of clivus bone erosion on follow-up CT imaging. Mucormycosis osteomyelitis is a diagnosis of exclusion when intramedullary gas is shown on a CT within the clivus for an immunocompromised or metabolically impaired patient.

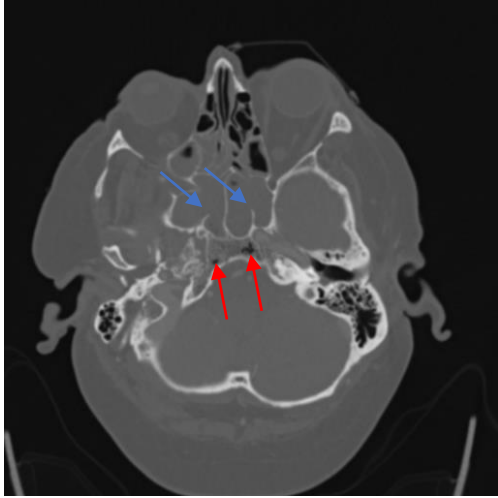


Figure 1: Head CTA Axial section demonstrates sinusitis (blue arrows) and gas within the clivus (red arrows)