

Abstract O3

Acute Invasive Fungal Rhinosinusitis as a Complication of Uncontrolled Diabetes

Luqman Afiq Mohamad Ishak¹, Ramiza Ramza Ramli¹, Norasnieda Md Shukri¹

Fungi are known to cause opportunistic infections in immunocompromised hosts. Acute invasive fungal rhinosinusitis (AIFR) is a potentially life-threatening condition for diabetic patients due to their affinity for acidotic environments with high glucose concentrations. Fungal hyphae invade the epithelial tissue with potential neural and vascular involvement. Here we outline a case of AIFR as a sequela of uncontrolled diabetes mellitus (DM). A 49-year-old Malay lady with underlying DM complained of left-sided throbbing headaches for 2 weeks. The pain radiates to the left facial area with a numbness sensation, facial asymmetry, and visual disturbance. There is no fever, no nasal blockage or discharge, and no ear symptoms. She denied any history of trauma. Upon assessment, there is no external deformity. The left facial nerve (House-Brackmann grade III) and trigeminal nerve (V2) were affected. Nasoendoscopy showed a blackish discoloration over the left inferior turbinate (IT) and pus from the left osteomeatal complex (OMC). Computed tomography reported heterogeneous dense soft tissue density within the left maxillary sinus extending to the left extraconal space, OMC, and IT, with surrounding bony erosion. Initial blood glucose and ketone levels were raised in the presence of metabolic acidosis. A multidisciplinary approach including otorhinolaryngology, medical, and ophthalmology teams is paramount in the early diagnosis and optimization of the underlying immunocompromised state. The patient underwent multiple endoscopic surgical extirpations and fungal deloading under general anesthesia. Simultaneously, the antifungal regimen of intravenous Amphotericin B was administered for 4 weeks. Prompt management of disease progression and complications of the treatment itself is vital to improve the patient's survival rate. Fungal culture isolated *Rhizopus*, commonly encountered in mucormycosis. Histopathological tissue was negative for malignancy. The repeated scope showed recovering pink mucosa in the left nasal cavity, and the patient was discharged well with improving facial weakness.

Keywords: fungal, rhinosinusitis, diabetes mellitus, immunocompromise

1. Department of Otorhinolaryngology-Head and Neck Surgery, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

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Correspondence to:

Dr. Luqman Afiq Mohamad Ishak, Medical Officer, Department of Otorhinolaryngology-Head and Neck Surgery, School of Medical Sciences, Health Campus, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia.

Email: luqman_afiq90@yahoo.com