diabetes. Early diagnosis and combined antifungal therapy with surgical debridement are essential for infection control.

Keywords: Mucormycosis, Diabetes, Spider.

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593

MUCORMYCOSIS IN THE RHINO-CEREBRAL REGION IN THE CONTEXT OF A GROWTH HORMONE–SECRETING PITUITARY MACROADENOMA: A CASE REPORT

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Mucormycosis (MCM) is an infection caused by fungi of the order Mucorales, characterized by angioinvasion, tissue necrosis, hematogenous dissemination, and often adverse outcomes. A 33-year-old man with diabetes presented with rhinorrhea, proptosis, periorbital edema, and reduced visual acuity in the left eye for six weeks. Computed tomography showed left-sided rhinosinusitis, a subperiosteal abscess, and facial cellulitis. Septoplasty, maxillary antrostomy, ethmoidectomy, orbital decompression, and drainage were performed, along with empiric antibiotic therapy. Despite these measures, he developed vision loss, mydriasis, and ophthalmoplegia, requiring repeat debridement, during which direct examination of the material revealed filamentous fungi with coenocytic hyphae compatible with MCM; liposomal amphotericin B (L-AmB) was started. Culture confirmed Rhizopus spp. The patient reported an initial diabetic decompensation one year earlier with irregular insulin use, and had clinical signs suggestive of acromegaly, including enlargement of extremities, sleep apnea, and progressive visual field loss. Endocrine evaluation demonstrated panhypopituitarism, elevated GH and IGF-1, and gonadotropic and thyrotropic deficiencies, confirming the diagnosis. Pituitary MRI revealed a macroadenoma with suprasellar extension ($2.4 \times 2.3 \times 3.2$ cm), which was not surgically addressed due to the active infection. After 14 days of treatment, he developed cavernous sinus thrombosis and underwent a third surgical procedure with orbital exenteration and inferior turbinectomy. Given progressive worsening despite extensive surgical clearance and L-AmB, isavuconazole was added. Despite insulin administration, glycemic control was only achieved after starting octreotide, a somatostatin analog capable of inhibiting GH and IGF-1 secretion and increasing insulin sensitivity. After eight weeks of combined antifungal therapy, with clinical and radiological improvement, he was discharged on isavuconazole, which was stopped after one month, and he remains stable under outpatient follow-up for 14 months. MCM is a medical emergency, and the association with uncontrolled acromegaly worsened prognosis. Cure depends on a multidisciplinary approach including optimized antifungal therapy, aggressive surgical management, and control of the underlying risk condition—here requiring a somatostatin analog to treat acromegaly.

Keywords: Mucormycosis, Acromegaly, Pituitary macroadenoma, Isavuconazole, Somatostatin analog.

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594

RHINO-FACIAL MUCORMYCOSIS IN A DIABETIC PATIENT: A CLINICAL-SURGICAL EMERGENCY

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Mucormycosis is an opportunistic, aggressive, and rapidly progressive fungal infection caused by fungi of the order Mucorales, affecting predominantly immunocompromised individuals. Among the main risk factors, diabetes mellitus stands out, especially when uncontrolled, due to predisposition to fungal proliferation in environments of hyperglycemia and acidosis. The rhino-facial form, frequently associated with tissue necrosis, can invade facial structures, the orbit, and the central nervous system, and is considered a medical emergency. We report the case of a 65-year-old woman with type 2 diabetes mellitus on insulin, hypertension, and asthma, who in December 2024 developed ulceration of the hard palate with purulent discharge and loss of upper teeth. After multiple dental consultations and initially inconclusive biopsies, histopathology performed in April 2025 confirmed the presence of broad, irregular, coenocytic hyphae compatible with mucormycosis. Facial CT showed pansinusitis, bony destruction of the hard palate and sphenoid sinuses, with invasion of the pterygopalatine fossa, without intracranial involvement. She was referred to a tertiary center and started on amphotericin B deoxycholate, later switched to the liposomal formulation due to renal toxicity. During hospitalization, she developed pneumonia and cellulitis of an upper limb, both treated with broad-spectrum antibiotics. She underwent surgical debridement in two stages, with extensive resection of necrotic tissue. Direct mycological examination showed hyaline hyphae, and culture revealed a fast-growing cottony colony suggestive of Rhizopus spp. After six weeks of intravenous antifungal therapy, oral isavuconazole was started. She showed progressive clinical improvement, maintaining hemodynamic stability and renal function, and was discharged in June 2025 with outpatient follow-up in infectious diseases and endocrinology. This case reinforces

the importance of early diagnosis and multidisciplinary management of rhino-facial mucormycosis, emphasizing the therapeutic triad of systemic antifungal therapy, aggressive surgical debridement, and strict metabolic control as a cornerstone for successful treatment.

Keywords: Diabetes Mellitus, Rhino-Facial, Rhizopus, Amphotericin B.

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595

RHINO-ORBITAL MUCORMYCOSIS AFTER A WORKPLACE ACCIDENT IN A PATIENT WITH RECENT COVID-19: A CASE REPORT

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Introduction: Mucormycosis is a rare disease that can cause deformities and has high mortality. It is caused by fungi of the order Mucorales, which are naturally found in the environment. The main risk factors are diabetes, neoplasms, immunosuppression, trauma, and more recently it has been associated with COVID-19. In this report, we describe a case of a patient with a recent history of COVID-19 who suffered a workplace accident and was diagnosed with rhino-orbital mucormycosis.

Case report: A 37-year-old carpenter with class I obesity, hypertension, and diabetes developed COVID-19, was hospitalized, and used oral prednisone and low-flow oxygen. One month later, while at work, a wooden splinter penetrated his right eye. Two days later, he developed pain, periorbital edema, a nodule at the medial canthus of the right eye, and intermittent purulent discharge. CT showed "thickening and stranding of the right periorbital fat. Thickening and enhancement of the right globe and the right optic nerve. Right-sided inflammatory paranasal sinus disease." He received two prolonged courses of antibiotics without improvement and underwent three surgical procedures. Histopathology then identified: "chronic inflammatory process with acute necrotizing exacerbation associated with fungal infection. The features of the fungal structures favor the class Zygomycetes (genus Mucormycosis)." Biopsy culture grew "Mucorales sp." He progressed with amaurosis, optic neuritis, and cavernous sinus thrombosis. He underwent right orbital exenteration. He received lipid complex amphotericin B at 5 mg/kg/day. He was discharged on oral isavuconazole 200 mg once daily with outpatient follow-up. Control MRI no longer showed evidence of infection, in addition to complete symptom improvement. He evolved with full recovery of symptoms and returned to work, with guidance to use personal protective equipment.

Comments: Mucormycosis is often difficult to diagnose. Its association with COVID-19 is still not well established; it has been reported that 93% of patients had the disease during hospitalization for COVID-19 and 8% had prior SARS-CoV-2 infection one to three months earlier, in a study across 18 countries. Workplace trauma constitutes a risk for infection. Treatment is based on two pillars: early surgical treatment and antifungal therapy. Sequelae are frequent and can be severe.

Keywords: Mucormycosis, Covid19, Antifungal, Treatment.

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596

THE ECONOMIC IMPACT OF MANAGING INVASIVE ASPERGILLOSIS IN BRAZILIAN PRIVATE HEALTHCARE: A COMPARATIVE ANALYSIS BETWEEN ISAVUCONAZOLE AND VORICONAZOLE

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Introduction/Objectives: Proper management of invasive aspergillosis must balance clinical efficacy and financial sustainability across the following main components: antifungal drugs, adverse events, and hospitalizations. This study aimed to compare the economic impact of isavuconazole versus voriconazole for the treatment of invasive aspergillosis from the perspective of Brazilian private healthcare.

Methods: Three comparative scenarios were defined over a 42-day time horizon, according to the route of administration of the drugs studied: (1) intravenous; (2) intravenous with switch to oral; (3) oral. Treatment costs were calculated based on the CMED price list. An average body weight of 60 kilograms was adopted to calculate weight-dependent costs. A micro-costing approach was used to estimate the costs of adverse events and hospital daily rates from the Brazilian private healthcare perspective. Published literature was used to assign costs of adverse events and hospitalization for each drug [1, 2]. Total cost was calculated as the sum of treatment cost, adverse events, and hospitalization.

Results: Isavuconazole had lower costs for adverse events (R$ 5,685.87) and hospitalization (R$ 11,954.12) compared with voriconazole (R$ 7,472.13 and R$ 23,908.23, respectively). Comparative scenarios—treatment cost and total cost: (1) Intravenous administration: Isavuconazole: R$ 88,059.64; total: R$ 105,699.62. Voriconazole: R$ 118,193.52; total: R$ 149,573.88. (2) Intravenous with switch to oral: Isavuconazole: R$ 40,315.18; total: R$ 57,955.17. Voriconazole: R$ 45,788.43; total: R$ 77,168.79. (3) Oral administration: Isavuconazole: R$ 33,153.51; total: R$ 50,793.50. Voriconazole: R$ 47,122.84; total: R$ 78,503.20.

Conclusion: Isavuconazole showed total cost reductions of 41.5%, 33.2%, and 54.6% compared with voriconazole in the intravenous, intravenous with switch to oral, and oral administration scenarios, respectively. Based on these results,