



CLINICAL IMAGE

Rhino-orbito-cerebral mucormycosis in a post-COVID-19 diabetic patient: Rare case from Iran

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Abstract

Rhino-orbito-cerebral mucormycosis (ROCM) is a progressive and life-threatening disease that is caused by a fungal infection. Every uncontrolled diabetic patient with a skin lesion on their head and neck, sinusitis symptoms, headache, and orbital edema should be evaluated for mucormycosis.

KEYWORDS

diabetes mellitus, fungal infection, mucormycosis, rhino-orbito-cerebral

1 | CASE PRESENTATION

Mucormycosis is a fungal infection that often causes an invasive and life-threatening disease. Mucormycosis is an opportunistic infection caused by Mucorales-related organisms.¹ These organisms are widespread in nature, but they can cause disturbing rhino-orbital and cutaneous infections in susceptible patients, as this case demonstrates.² This patient's new-onset glucocorticoid-induced diabetes and steroid immunosuppression may have predisposed him to invasive mucormycosis.

We describe a 56-year-old man with a history of 10 years of diabetes who is being treated with hypoglycemic agents in northern Iran. He was hospitalized a month ago due to

coronavirus disease and discharged in good general condition. Again, he referred to weakness, lethargy, fever, and a loss of appetite, as well as anemia, scleral icterus, orbital edema, and a small lesion on the left side of his face's skin. Tests such as CBC, BS, HbA1C, ESR, CRP, blood culture, and ABG are all requested for patients suspected of having bacterial or fungal infections.

Since the patient's BS level was greater than 250 mg/dl, insulin treatment was started immediately. The patient was admitted to the intensive care unit (ICU) and consulted with an otolaryngologist, endocrinologist, ophthalmologist, and infectious disease specialist. He lost his left eye due to a unilateral involvement of the facial muscles and orbit. A pathological specimen has been sent to the

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FIGURE 1 Black necrotic lesion on the left side of face's skin (below orbit)

laboratory for examination of fungal hyphae and confirmation of mucormycosis. The patient's black necrotic tissue was debrided, and intravenous treatment with liposomal amphotericin B (a dose of 5 mg/kg; a total dose of 300 mg daily for 10 weeks) was started. Despite an early diagnosis and treatment, unfortunately, the patient died two weeks after admission following sepsis. (Figure 1).

2 | DISCUSSION AND CONCLUSION

The typical clinical symptoms of mucormycosis in susceptible individuals include combined orbital inflammation, eyelid edema, blepharoptosis, unilateral periorbital facial pain, headache, acute ocular motility alteration, and acute vision loss. The pathognomonic sign of mucormycosis is a black necrotic lesion (Figure 1). Mucormycosis should be ruled out in any uncontrolled diabetic patient, especially those who are post-COVID-19, who have skin lesions on their head and neck, sinusitis symptoms, headache, and orbital edema. It needs to be admitted to the ICU and treated with liposomal amphotericin B intravenous.

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CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

ZZ and AS involved in interpretation and collecting of data, and editing the manuscript. MF, ESB, and LD involved in drafting first version of manuscript and editing. MS is responsible for collecting data and submitting the manuscript. All authors reviewed the paper and approved the final version of the manuscript.

ETHICAL APPROVAL

The study was approved by our local ethics committee.

CONSENT

Written informed consent was obtained from the patient's next of kin to publish this report in accordance with the journal's patient consent policy.

DATA AVAILABILITY STATEMENT

No datasets were generated or analyzed during this clinical image.

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