



Editorial Article

Mucormycosis: Black Fungus, A Deadly Post-COVID Infection

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Coronavirus disease 2019 (COVID-19) is a new disease caused by a novel coronavirus (SARS-CoV-2) which was first documented in China in December 2019 and subsequently causing a worldwide pandemic. During the current pandemic of COVID-19, a variety of manifestations and complications have emerged and are being reported.¹ Mucormycosis is a rare, opportunistic, aggressive, fulminant, and frequently fatal infection. In India, “Mucormycosis (Black Fungus)” is one the most commonly observed secondary infection in COVID-19 infected patients in post-COVID-19 stage. COVID-19 infection was a risk factor but the surge in mucormycosis cases is also because of indiscriminate use of steroids and uncontrolled diabetes. Early diagnosis of mucormycosis becomes mandatory as it can become life-threatening owing to the invasive ability of the fungi into blood vessels, embolizing to distant organs, including the brain.

Clinically, five major forms of mucormycosis have been recognized which include the rhino cerebral (44%–49%), which is the most common form, followed by cutaneous (10%–16%), pulmonary (10%–11%), disseminated (6%–11.6%), and gastrointestinal (2%–11%) forms. The rhino cerebral form usually presents as a paranasal infection with or without an extension into the oral cavity, especially in immunocompromised individuals, and is rarely seen in healthy or immunocompetent individuals. Clinical infection usually progresses rapidly, causing death within few days of presentation.^{2,3}

Mucormycosis can commonly affect areas such as the nose, eyes, brain, and sinuses. Therefore, recovering COVID-19 patients should seek medical help as and when they experience the following symptoms.⁴



- Swelling in the face
- Pain and numbness
- Unusual (bloody or black-brown) discharge from the nose
- Swollen eyes
- Nasal or sinus congestion
- Black lesions on nasal bridge or upper inside of the mouth

To prevent the occurrence of mucormycosis in post-COVID-19 patient, limit the usage of steroids for 5 to 10 days to mild to moderate dosage to people in early-stage or with mild COVID-19 infections. Amphotericin B is the anti-fungal of choice for treating mucormycosis followed by surgical debridement.

A new hurdle stands in front of the medical fraternity as cases of White Fungus have been seen in Bihar. According to experts, white fungus infections are more dangerous than black fungus due to its acute effect on the lungs and other body parts including nails, skin, stomach, kidney, brain, private parts, and mouth. Therefore, we must be vigilant about the secondary fungal infections in COVID-19 patients.

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