

CoV-/N-SIGHTS: Evidence-Based Answers to FAQs Director General Medical Services (Navy)



FAQ # 07 (24 May 2021): BLACK FUNGUS AND COVID-19

1. What is Black Fungus (Mucormycosis)?

Black Fungus (Mucormycosis) is a fungal infection mainly affecting people with chronic health problems that reduces their immunity (ability to fight environmental pathogens). The fungus (mold) most commonly belongs to Rhizopus species and order Mucorales, hence the name Mucormycosis.

2. Who is at Risk for Mucormycosis?

People with comorbidities (chronic medical ailments), uncontrolled diabetes mellitus, immunosuppression by steroids or prolonged ICU stay can be at risk for Mucormycosis.

Self-medication and indiscriminate use of Steroids and Oxygen have been suspected to have link between the rise in Black Fungus cases and Second wave of the COVID-19 Pandemic.

3. What are the Clinical Forms of Mucormycosis?

There are five major clinical forms of Mucormycosis; of these, **Rhinocerebral** (affecting nasal sinuses and sometimes brain) and **Pulmonary** (lungs) are the most common. Other rare forms are **Skin, Gastrointestinal and Disseminated Type** (spreads through the bloodstream to affect any part of the body).

4. What are the Symptoms and Signs of Mucormycosis?

Symptoms of **Rhinocerebral (sinus and brain) Mucormycosis** include one-sided facial swelling, headache, nasal or sinus congestion, black lesions on nasal bridge or upper inside of mouth that quickly become more severe and fever.

Symptoms of **pulmonary (lung) mucormycosis** include fever, cough, chest pain, and shortness of breath.

5. How is Diagnosis of Mucormycosis Confirmed?

A sample of fluid from your respiratory system or a tissue biopsy, in which a small sample of affected tissue is analysed in a laboratory for evidence of Mucormycosis under a microscope or in a fungal culture.

6. How Does Someone Get Mucormycosis?

Patients who are at high risk (as brought out in Point-2 above) get Mucormycosis through **inhalation of fungal spores** from the air either from the environment or contaminated devices (like oxygen delivery equipment/ ventilators etc).

7. Is Black Fungus Contagious?

Unlike COVID-19, Mucormycosis is **not** contagious and does not spread from one person to other.

8. What is the Risk of Death Among Patients of Mucormycosis?

Mucormycosis is a known to be a rare infection to occur but when it occurs it will be usually a life-threatening infection. A review of published mucormycosis cases found an overall all-cause mortality rate of **54%**. The mortality rate varied depending on underlying patient condition, type of fungus, and body site affected (for example, the mortality rate was 46% among people with sinus infections, 76% for pulmonary infections, and 96% for disseminated Mucormycosis).

9. How do you Prevent Mucormycosis in COVID-19 Infections?

Patients (especially known Diabetics) who have recovered from COVID-19 should monitor their **blood glucose levels** regularly. Use of **steroids** by COVID-19 patients should be judicious. For oxygen therapy, patients should use **clean and sterile oxygen-delivery equipment**.

After recovering from coronavirus, one should closely monitor and should not miss any warning signs and symptoms mentioned above, as the fungal infection is found to emerge even weeks or months after recovery.

10. How is Mucormycosis Treated?

Antifungal medicines like Amphotericin B are available for treatment. Often, mucormycosis requires **surgery** to cut away the infected tissue. **Early intervention/** treatment is the key to prevent mortality due to Mucormycosis.

References.

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