

The incidence of Mucormycosis superinfection: A challenge to current Covid-19 pandemic

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Madam, the last year emerged COVID-19 disease is a highly transmissible viral infection caused by novel coronavirus named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The pandemic infected over 220 million people, and caused over 4.6 million deaths, within Pakistan there are about 1.2 million confirmed cases and approximately 26,000 deaths, dated 12th September 2021.¹ Its primary mode of transmission is human to human via respiratory droplets and direct contact. The clinical presentation can range from asymptomatic to severe pneumonia and death.² Following the rise in Covid-19 cases, there has also been a surge in number of cases of Mucormycosis fungal superinfection described as, Covid-19-Associated mucormycosis (CAM).³ (CAM) is already declared an epidemic in India, the neighbouring country of Pakistan, due to its rapidly increasing number of cases, currently present at 14,872 cases.⁴ Recently Pakistan has alarmingly reported 5 cases of mucormycosis in Covid-19 patients out of which 4 patients died.⁵

Mucormycosis is an opportunistic invasive fungal infection frequently presenting in immunosuppressed patients with high glucose levels (Diabetes & Steroid-induced hyperglycaemia).⁶ Covid-19 patients are already immunocompromised due to impaired cell mediated immune response and decreased (CD4+) and (CD8+ T-cells).⁷ Combined with misuse of antibiotics in Covid-19 patients that further suppress the normal bacterial flora and steroid use in diabetic covid-19 patients provides an ideal condition for mucormycosis to grow. The 2 clinical manifestations are Rhino-Orbital-Cerebral (ROCM) and Pulmonary Mucormycosis. The (ROCM) form commonly manifests in (CAM) disseminating systemically, resulting in facial deformity, cranial nerve palsy, blindness, brain invasion and abscesses with necrosis of the nasal cavity. Mortality is high, especially if diagnosis and prompt initiation of medical and surgical therapy are delayed.⁶

Since Pakistan has over 27.4 million cases of diabetes (≥ 20 years)⁸ and an overall hot and humid environment that

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promotes growth of mucormycosis, (CAM) is an emerging problem necessitating increased vigilance in recovered and infected Covid-19 patients. Hence, blood glucose levels must be closely monitored and controlled, particularly in diabetic Covid-19 patients or those receiving corticosteroids. Corticosteroid therapy should only be used when required and only at recommended doses and duration. Stronger restrictions on over-the-counter sales of systemic corticosteroids and antibiotics should be considered by the government. Efforts must be taken to educate health care providers and aware the public about signs and symptoms of mucormycosis. Lastly, the health care delivery system should be well equipped to pre-empt such crisis.

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