Novel coronavirus disease-19 (COVID-19) is one of the worst disasters that the humankind has faced till date. A myriad of clinical symptoms and complications have already been documented and the literature is still growing leaps and bounds as the new stains are emerging and more patients are being affected. As the disease continues to hit the world repeatedly, more and more specialists from dentistry, ophthalmology, and otolaryngology are overwhelmed with an increased burden of a deadly post-COVID complication, i.e., mucormycosis. Commonly known as “black fungus,” mucormycosis is one such complication that is maiming the maxillofacial region of recovering and recovered COVID-19 patients.

Mucormycosis is generally a rare and aggressive disease caused by fungi of the order Mucorales. The fungus is ubiquitous in nature and commonly found in soil, plants, manure, and decaying fruits and vegetables. It has been observed as a commensal in the nasal cavity of healthy people. However, the fungus typically is known to cause disease in immunocompromised patients commonly suffering from uncontrolled diabetes, neutropenia, malignancy, organ transplantation, high serum iron levels, and HIV/AIDS. Furthermore, a cutaneous form of the disease has also been described in immunocompetent hosts after trauma or contaminated injection or burns. Fungi of the genus Rhizopus, Lichtheimia, Mucor, and Rhizomucor are commonly implicated in mucormycosis. The mortality of this rampaging disease varies from 40% to 80%.

Clinically, maxillofacial mucormycosis may present with atypical signs and symptoms mimicking other common diseases such as dentoalveolar abscess, periodontitis, unexplained mobility of teeth and abscess formation, nasal stuffiness, sinusitis, orofacial pain and edema, ulceration, and crusting. When the disease progresses toward the eyes, the complaints may change to proptosis, ptosis, chemosis, and ophthalmoplegia. Other associated symptoms are fever and headache and various neurological signs may be seen in cases of cranial extension. Lack of clinical suspicion and delay in diagnosis supplemented with difficulty in isolating the causative organism may contribute to fulminant nature of the disease.

COVID-19 causes immune dysregulation, with a decrease in the number of T-lymphocytes, i.e., CD4+ and CD8+ T-cells, which leads to alteration in the immune response of an individual. Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) shows a similar biological and clinical behavior as SARS-CoV and Middle East respiratory syndrome, which was also responsible for an increased incidence of mycotic infections. But, why such a hue and cry for post-COVID mucormycosis in India only? Probably because India has a high prevalence of Type 2 diabetes mellitus, a well-known risk factor for COVID-19 disease. Prevalences of diabetes and impaired glucose tolerance were found to be 12.1% and 14.0%, respectively. COVID-19 may predispose infected individuals to hyperglycemia and subsequent ketoacidosis that, in turn, promotes the incidence of invasive mycosis through the availability of free iron in serum. Even before the arrival of COVID-19, India shared almost 40% global burden of mucormycosis. Hence, the incidence of this mold in India is something rare but not new.

The development of mucormycosis can also be attributed to the use of glucocorticoids, immunomodulators like tocilizumab, and an array of antibiotics used during the management of COVID infection to reduce inflammation and risk of secondary bacterial infections. This is supplemented by the humid and tropical conditions of our country, especially in a hospital environment, that promotes the growth of this fungus.

A multidisciplinary team approach is required for management of mucormycosis which includes maxillofacial surgeon, radiologist, pathologist, otolaryngologist, ophthalmologist, and microbiologist. Adequate results are achieved with a good control of diabetes and discontinuation of immunosuppressant. Although, surgery is the mainstay modality of treatment, it may not cure the disease alone. Hence, the surgical debridement of the infected area should be performed as soon as possible once the diagnosis is confirmed. Liposomal amphotericin B is considered as the drug of choice in a dose of 5 mg/kg/day. 3–6 week therapy with liposomal amphotericin B is followed by a consolidation therapy with posaconazole or

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isavuconazole for another 3–6 months. Posaconazole can also be given as first-line drug therapy in cases the patient has renal issues or intolerance to amphotericin B. A good prognosis can be achieved with an aggressive surgery and intravenous antifungal therapy. Periodical monitoring with appropriate imaging is required.

A trained and efficient maxillofacial surgeon will prove to be a valuable asset for timely diagnosis and efficient management of mucormycosis. hence, as the post-COVID complications continue to evolve, we as maxillofacial surgeons need to remain at the war footing to help our patients to come out of these complications and revert back to a normal healthy life.

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