

Pre and Post COVID-19 Situation of Mucormycosis across the Subcontinent

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Received date: 03 August, 2021; **Accepted date:** 19 August, 2021; **Published date:** 30 August, 2021

Citation: Shakir A, Bhinder K, Asrar A, Sukaina M (2021) Pre and Post COVID-19 Situation of Mucormycosis across the Subcontinent J Intensive Crit Care Vol.7 No. 8: 57.

Editorial Note

We have recently seen an increasing trend of Mucormycosis, an opportunistic fungal infection across Asian Subcontinent. Mucormycosis is an acute angioinvasive, and micro thrombotic infection with mainly rhino orbital, rhino cerebral, cutaneous or pulmonary manifestations. The most known underlying factors include DM, malignancies, Immunomodulators including the steroids, Iron overload, malnourishment, neutropenia etc [1]. Data from 1940-2020 showed a rising trend in cases globally [2,3]. Different studies in India concluded that the incidence of Mucormycosis is 0.14/1000 (vs 0.148/10,000 globally), 80 times higher than the developed world [4]. The additional contributing factors are the moist and humid weather, Cow dung use for various rituals and post TB pulmonary damage. The incidence is comparable across the Subcontinent, including Pakistan, though the prevalence of DM (the most common factor for Mucormycosis) is 10% in Pakistan vs 8% in India [5]. Actual incidence may be higher in Pakistan.

During the second wave of the Covid19 pandemic, India has been hit hard with triple mutant variants with a thousand fold increase in COVID cases compared to the 1st wave. As the COVID cases increased, so was the frequent treatment with steroids. Steroids might have been overused against the guidelines, resulting in increased side effects and opportunistic infections like Mucormycosis. As of May 22, 2021, India has reported 8,848 post COVID Mucormycosis cases. Along with iatrogenic steroid induced immunosuppression, severe COVID pneumonia usually occurs in people with underlying comorbidities like DM which contributes to invasive Mucormycosis. Post COVID immunosuppression and T-cell dysfunction also contributed to this surge, which can be variant related. Pakistan so far has reported 18 cases of COVID related Mucormycosis, way lower

than India, probably because it has not dealt with the Indian variant yet. Also, the first wave of COVID in India didn't show this massive surge in Mucormycosis cases indicating the probable role of this variant in the disease process.

Conflict of Interest

No conflicts to report

Authors' Contributions

All authors contributed for the manuscript

Funding

None

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