Role of Face Masks in the Rise of Mucormycosis Cases in India during the COVID-19 Pandemic

Sir,

Mucormycosis has been known to have sporadic and seasonal outbursts. Even differences in epidemiology have been noticed between developed and developing countries. Patients with uncontrolled diabetes, transplant patients on immunosuppression, and hematological malignancies are found to be particularly vulnerable to this infection. In developing countries like India, mucormycosis is mainly seen in patients with uncontrolled diabetes and trauma.

The World Health Organization on March 11, 2020, declared COVID-19 caused by the virus SARS-CoV-2 as a global pandemic. India being the second-most populous country in

the world was severely affected by this pandemic with more than 10 million cases of COVID-19.^[1]

Reports are now emerging regarding the co-infections and super-infections in the COVID-19 patients, both in-hospital and postrecovery. Especially, the fungal co-infections are being widely reported.^[2] Even the regulatory bodies including the Centers for Disease Control are issuing advisories regarding a rise in fungal infections during the COVID-19 pandemic. Most of these cases being reported to include infections such as aspergillosis or invasive candidiasis.^[3]

In India, numerous reports are emerging regarding the rise in cases of mucormycosis, especially the rhinocerebral variant. It

is currently being reported widely in the newspaper articles^[4] and scientific reports.^[5] There is a wide consensus developing among the medical fraternity to be on the lookout for the potential increase in systemic fungal infections during this COVID-19 pandemic.^[6]

Governments and health authorities from around the world have given advisories regarding the use of face masks in the prevention of spread of SARS-CoV-2 virus. Although there is a substantial consensus among the medical community regarding the usefulness of face masks during this pandemic, there are some concerns about possible side effects. Some of these concerns being, a false sense of security, inappropriate use, quality and volume of speech, and breathing difficulties. These concerns address the protective capacity of face masks against COVID-19 and general discomforts from wearing masks.

Here, I would like to emphasize few more concerns regarding prolonged widespread use of face masks, like:

1. Repeated use of the same mask and the use of contaminated masks. India, being a developing country has a large socio-economically backward population. This leads to both lack of awareness of asepsis and affordability, resulting in multiple reuses of face masks and the use of soiled or contaminated face masks
2. Reduction in the prevalence of other common respiratory infections attributable to the widespread use of face masks, and this in turn leading to changes in the microbial flora of the respiratory tract and paranasal air sinuses, resulting in rise of opportunistic fungal infections
3. Changes that can happen to the mucosal architecture or relative humidity of paranasal sinuses due to the prolonged use of face masks.

There is no doubt about the important role played by face masks in preventing the spread of SARS-CoV-2. However, it is also important to emphasize on proper use of face masks and look into the side effects of such a widespread lifestyle change.

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