Fungal epidemic lurking in the shadows of a viral pandemic

Dear Editor,

We read with great interest the recent editorial, “Code Mucor”[1] published in Indian Journal of Ophthalmology. We appreciate the author for enlightening the fraternity and the general population about red flag symptoms of COVID-19-associated mucormycosis which is the need of the hour. Looking at the upsurge of rhino-orbital-cerebral (ROCM) in India, it has now been declared as an epidemic in many states of India.

We have never come across in many years with such elaborate staging of ROCM.[2] Earlier it was classified into three clinical stages. Stage-I involving sino-nasal area, stage-II involving sino-orbital infection, and stage-III involving intracranial compartment.[2] The clinical assessment alone might not justify the extent of staging, as the radiological findings might surprise us. The proposed staging by the author with adjunct radiology to the clinical acumen helps in better assessment of the stage of the disease.

Our department is performing diagnostic nasal endoscopy (DNE) with contrast-enhanced magnetic resonance imaging (CEMRI) in high-risk patients with alarming symptoms. We hereby report the staging of 15 patients of ROCM by clinical assessment/DNE and comparing it with radiological derived staging [Table 1]. In eight patients, the clinical and radiological staging were the same, while in seven patients, we observed that MRI has upstaged the disease. Two patients of stage 1 were upstaged to stages 2b and 2c, while five patients upstaged in subcategories of the same stage. This upstaging helped us in proper evaluation and management. With the numbers rising, we have a dedicated mucor ward with almost 60 patients. We are now witnessing patients of ROCM with only

Table 1: Demographics, staging, and management

| Age/Sex | Presentation | Staging by clinical assessment + DNE | Staging by MRI | Treatment |
|---------|--------------|-------------------------------------|----------------|-----------|
| 29/M    | Nasal        | 1b                                  | 2d             | Endoscopic endonasal debridement |
| 30/M    | Nasal and facial | 2c                             | 2c             | Endoscopic endonasal debridement |
| 37/M    | Nasal        | 2a                                  | 2c             | Endoscopic endonasal debridement + infrastructural maxillectomy |
| 37/M    | Nasal, orbital, oral, and cranial | 4a                             | 4a             | Total maxillectomy with orbital exenteration |
| 40/F    | Nasal        | 2a                                  | 2d             | Endoscopic endonasal debridement |
| 43/M    | Nasal and palate | 2c                             | 2d             | Endoscopic endonasal debridement + infrastructural maxillectomy |
| 45/M    | Nasal and oral | 2c                              | 2c             | Endoscopic endonasal debridement |
| 45/M    | Nasal        | 1a                                  | 2c             | Endoscopic endonasal debridement |
| 48/F    | Nasal and facial | 2d                             | 2d             | Debridement (Endoscopic endonasal + Caldwell Luc) |
| 48/M    | Nasal and orbital | 3a                             | 3b             | Orbital decompression |
| 50/M    | Nasal, facial, and oral | 2c                             | 2c             | Debridement (Endoscopic endonasal + Caldwell Luc) |
| 53/F    | Facial and orbital | 3a                             | 3a             | Endoscopic endonasal debridement |
| 54/M    | Nasal and orbital | 3b                             | 3b             | Orbital decompression |
| 63/M    | Nasal and orbital | 3a                             | 3c             | Total maxillectomy with orbital exenteration |
| 70/M    | Nasal, facial, and oral | 2d                             | 2d             | Endoscopic endonasal debridement |
involvement of orbital compartment sparing nasal cavity and face. DNE in such cases is inconclusive, while CEMRI showed us active disease in paranasal sinuses and orbital compartment. Therefore, early detection of mucormycosis with accurate staging (clinical + radiological) is essential for a good prognosis. A teamwork of ophthalmologists and otorhinolaryngologists in unison is paramount to fight this epidemic.

Acknowledgement
We acknowledge Department of Ophthalmology, Microbiology, Medicine, and Neurology, at Dr. Sampurnanand Medical College, Jodhpur.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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Access this article online
Quick Response Code: Website: www.ijo.in
DOI: 10.4103/ijo.IJO_1549_21
PMID: 34304224

Cite this article as: Chouhan M, Solanki B, Shakrawal N, Shaikh N. Fungal epidemic lurking in the shadows of a viral pandemic. Indian J Ophthalmol 2021;69:2239-40.

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