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**In Reply to the Letter to the Editor Regarding  
“Management of Neurosurgical Cases in a Tertiary Care  
Referral Hospital During the COVID-19 Pandemic:  
Lessons from a Middle-Income Country”**



We thank Goyal et al.<sup>1</sup> for their interest in our article on the management strategy used for elective neurosurgery cases during the “first wave” of coronavirus disease 2019 (COVID-19) in our high-volume center.<sup>2</sup> As they rightly noted, the reduction in the number of cases was mirrored even in their institute, albeit with smaller absolute numbers. The first lockdown enabled us to increase the manufacturing facilities for personal protective equipment kits, diagnostic equipment (reverse transcriptase polymerase chain reaction, rapid antigen test), and so forth, which helped to tide us over the initial crisis of the shortage of essential equipment. It was very effective in providing time to prepare for the subsequent case load.<sup>3</sup> The increase in the caseload followed a parabolic curve, with a gradual rise and fall. Also, people were more apprehensive and followed the precautions more strictly. However, as the first wave gradually subsided, complacency and overconfidence took over and, gradually, the COVID-19 norms were followed less strictly. The “second wave” has been more ferocious and rapidly overwhelmed the available health infrastructure.<sup>4</sup> It also exposed the chronic shortcomings in the medical system in India, which will require long-term structural changes. In addition, the second wave affected younger age groups more severely, in contrast to the populations most affected during the first wave. The ongoing increase in fungal infections has further compounded the misery. As Goyal et al.<sup>1</sup> correctly pointed out, the second wave has been deadlier, with >400,000 cases daily and 4000 deaths daily recorded, with India the third country after the United States and Brazil to report such data.

Dedicating large portions of beds in every hospital across India to patients with COVID-19 has led to a “silent pandemic” for non-COVID-19 emergencies and patients scheduled for surgical procedures.<sup>5</sup> In neurosurgery itself, although the lockdowns significantly decreased the number of trauma cases and deaths, it also led to a reduced standard of care for patients with chronic disease and, subsequently, an increased rate of complications secondary to undermanagement.<sup>6</sup> Thousands of patients with acute and chronic non-COVID-19 conditions have been unable to access specialist care in the past year. Moreover, even those patients who had scheduled an outpatient visit could not attend—from a fear of leaving their house, the inability to travel owing to the lack of public transport, or the lack of someone who could bring them to the clinic. This is readily evident by the patients who have presented with unresectable tumors, the reduction in patients presenting to the emergency department, and the significant reduction in surgery for functional disorders

and patients scheduled for radiosurgery.<sup>5</sup> These decreases can be attributed to patients’ fear of being infected with COVID-19 by presenting to the hospital, the restricted transport options resulting from the lockdown, and the reduction in the number of beds allotted for non-COVID-19 cases.<sup>5</sup> Thus, it was, and is, of utmost importance that we, as the largest neurosurgical center in Southern India, continue to remain functional and helped to reduce the burden for such patients with appropriate precautions.<sup>2</sup> Also, we have continued to manage neurosurgical emergencies in COVID-19-positive patients. This became even more important because the All India Institute of Medical Sciences, New Delhi, had stopped elective surgeries for 10 months previously and again starting in April 2021.<sup>7,8</sup> Hence, although the morbidity and mortality due to COVID-19 have been unprecedented, efforts must also be directed to contain the non-COVID-19 neurosurgical diseases that are life-threatening and can only be ignored with serious consequences.

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