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Letter to the Editor: Neurosurgery in COVID Pandemic: An Experience from a Tertiary Care Center of Eastern Nepal



LETTER:

The coronavirus disease 2019 (COVID-19) outbreak was declared a Public Health Emergency of International Concern on January 30, 2020.¹ Around the world, health care systems were largely unprepared to deal with the potentially devastating surge of affected patients, particularly patients requiring mechanical ventilation. Required increases in hospital capacity included principally expansion of intensive care unit (ICU) and respiratory wards in regard to both beds and suitably trained medical and nursing staff. Preparation was urgent, but options and resources were limited. The reasonable approach was to redeploy existing bed capacity and reconfigure health care workforces. Outpatient activity was decreased, and nonurgent diagnostic tests and elective treatments were postponed. Such changes unsurprisingly reduced capacity of hospitals to manage other conditions.

ICUs were limited. The most common serious neurosurgical conditions that require ICU admission are intracranial hemorrhage and traumatic brain injury, with mortality rates of 30%–45%.^{2–4} For patients with COVID-19, the in-hospital mortality rate is also high, 28% overall, but it is much greater, >50%, in patients who require mechanical ventilation.⁵

Neurosurgical care has undoubtedly been impacted by these COVID-19 responses. Elective surgical procedures have been canceled so that operating room staff and equipment can be used for critical care. Outpatient activity has been reduced, both to redirect resources and to lower transmission of the disease by decreasing the number of people in hospitals. Neurosurgeons have faced unparalleled challenges, including working outside their area of expertise, prioritization of neurosurgical cases with limited resources, facing new ethical dilemmas, and being exposed to moral injuries, medicolegal risks, and, in some cases, financial uncertainties. Neurosurgical training and research also have been reduced.⁶

B.P. Koirala Institute of Health Sciences is a tertiary care center in Eastern Nepal; the Department of Neurosurgery serves

approximately 1 million people of Province 1. The COVID-19 pandemic was a real challenge to neurosurgery. In the first and second waves, 90 COVID-19-positive cases were handled; 69 cases were treated conservatively, and 21 were operated. This situation seriously tested the stamina of service providers as well as exposing them to an immediate risk on their health. Challenges including lack of resources, medicolegal risks, lack of trained staff owing to contraction of COVID-19, and lack of operating rooms and ICUs were magnified. Research and other academic activities were profoundly impacted. In fact, the weaknesses of the health care system were exposed and created an alarming challenge both to the preventive and the curative aspects of neurosurgery. With this lesson learned, it is an appropriate time to prepare the necessary equipment and the combined efforts of multiple specialties to fight COVID pandemic and other future pandemics.

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