Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Letter to the Editor Regarding: "Case Volumes and Perioperative COVID-19 Incidence in Neurosurgical Patients During a Pandemic: Experiences at Two Tertiary Care Centers in Washington, DC"

We read the article by Dowlati et al.,[1] in which the authors shared their thought-provoking observations to determine the risk of a neurosurgical patient becoming infected with coronavirus disease 2019 (COVID-19) in the perioperative period and the effect of COVID-19 on the neurosurgical case volumes. This is an important topic to study because resumption of neurosurgical services has begun after the initial periods of lockdown. Dowlati et al.[1] reported a low 2.8% positive COVID-19 rate among the patients in the perioperative period. The finding must be interpreted with caution because all the patients were not tested for COVID-19 preoperatively. Thus, the reported positive COVID-19 rate could not reveal the true incidence of perioperative infection. The greatest challenge has been (and continues to be) that patients infected with COVID-19 can be asymptomatic.[2] Also, because of logistics and many other issues, testing asymptomatic persons for COVID-19 has continued to be an issue of debate.[2,3] Although some attempts have been made to address perioperative COVID-19 transmission, its true incidence is not known.[4] Many other studies have shown a similar reduction in neurosurgical operative case volumes.[5-7] Dowlati et al.[1] reported a 50.1% decrease in operative cases and a 23.9% decrease in neurointerventional cases during the peak period of lockdown at 2 tertiary neurosurgical centers in the United States. The significant decrease in spine and functional neurosurgical cases is consistent with the findings reported by other studies.[5,7,8]

The findings of an increased length of hospital stay and increased complication rates in COVID-19–positive patients suggest that a higher complication rate is associated with perioperative COVID-19 transmission.[1] This finding is consistent with those from other studies reporting increased complications in patients with COVID-19 postoperatively.[9,10] It was interesting to note that an increase had occurred in nonelective cranial neuro-oncological cases.[1] This might have been because intracranial space-occupying lesions have more potential to expand and result in clinical deterioration. A maximum decline had occurred in the number of diagnostic neurointerventional cases in the absence of any significant decline in elective, urgent, or emergent cases.[1] To understand this, we need to further explore elective versus emergency (acute deterioration) indications for diagnostic neurointerventional investigations in periods before COVID-19. This is an interesting finding that requires further investigation because it might have resulted from patient-related factors or from unique policies that restricted the movement of people and, thus, limited the number of patients seeking healthcare access for minor stroke-related symptoms.[11]

Their study defined emergent cases as those for which intervention was required within 12 hours and urgent cases, those for which intervention was required within 1 week.[1] This categorization was probably determined by the underlying pathology, duration of onset of acute symptoms, and the expected rate of progression when the patient presented to the hospital. If so, the cases of the 3 patients in whom COVID-19 had been detected before the procedure, with a subsequent delay in intervention should not be grouped as emergent or urgent. The results and findings from their study have shown that a real risk of perioperative transmission exists and have summarized how the current COVID-19 pandemic has been changing the neurosurgical caseload patterns. The neurosurgical case volumes had decreased by >50% in the study period; hence, the positive COVID-19 rate they reported might only represent the tip of the iceberg.[1] It will be helpful if such information will be reported from the later part of the pandemic when COVID-19 cases have increased significantly and restrictions have been lifted. A greater positive COVID-19 rate in the perioperative period is likely to occur during the later phases of the pandemic. To summarize, the study by Dowlati et al.[1] represents an important study owing to the resumption of neurosurgical services after the initial periods of lockdown. Their findings have provided an idea of how COVID-19 has been changing neurosurgical caseloads and the transmission risk to patients. Their study can be extended, and future work, therefore, should seek to address these shortcomings.

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