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Letter to the Editor: 'Neurosurgical Planning in Patients' Management During the COVID-19 Pandemic? Our Early Experience in Bangladesh'

LETTER:

The novel coronavirus was first reported in Wuhan, China, in December 2019. The World Health Organization (WHO) formally declared COVID-19 a pandemic on March 11, 2020. Bangladesh's first confirmed COVID-19 case was reported on March 8, 2020, and from June 3 through June 17, Bangladesh experienced the highest number of cases. Currently, on June 17, 98,489 COVID-19 cases have been confirmed in Bangladesh. The number of deaths has risen to 1305 with a case fatality rate of 1.36%. These data show that Bangladesh has exceeded China in the number of cases and is the 18th most affected nation in the world.¹

COVID-19's large impact on patients, caregivers, doctors, nurses, and hospitals means that this disease also impacts neurosurgeons and their patients. A major consequence of the rapid spread of the virus is that hospitals run out of resources to treat patients. The goal is to decrease the number of surgeries to preserve resources (e.g., doctors, operating rooms, intensive care unit beds) for the treatment of COVID-19 patients.² Here we summarize our experience in managing neurosurgical patients during the COVID-19 pandemic at the Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh.

ADMISSION PROFILES

Patients are either admitted directly (direct admission) or referred from other departments (indirect admission). Before admission, patients undergo medical history checking and fever testing. In our setup, we believe that the systematic pulmonary computed tomography (CT) scan helps initially in assessing a patient's COVID-19 status, so we obtain a pulmonary CT before admission.³ COVID-19 polymerase chain reaction testing further reinforced the algorithms set up by the local committee and accelerated the diagnosis of suspected cases.

EMERGENCY CASE STRATIFICATION

Admitted patients belonged to 2 groups: those requiring an immediate surgical procedure (group I) and those requiring urgent but still scheduled surgery (group II). Emergency neurosurgical cases include traumatic cranial and spinal emergencies, intracerebral cerebral hemorrhages, acute hydrocephalus, tumors at risk of intracranial hypertension, cauda equina syndrome, spinal cord compression with neurologic deficit, etc.

PATIENT MANAGEMENT

Admission is limited to a maximum of 1 patient per room, and in the general neurosurgical ward a minimum of 6 feet physical distance between beds is maintained. Group I patients are

operated in the emergency operating room/casualty operating room; group II patients are operated in the main operating room, directly connected to the intensive care unit. Discharge is made early, and patients are followed up by teleconference. The patient's bed and room are then thoroughly sterilized and kept free of patients for at least 24 hours. During hospitalization, only 1 visitor per day/patient is allowed (wearing protective masks).

Each staff member is fitted with N95 masks and eye shields. All health care workers report their temperatures twice daily and declare any sickness through a desktop or mobile-based staff health surveillance system. Temperature recording compliance is monitored, and reminders are issued to noncompliant staff.⁴

For triage of the nonemergent surgical procedures, we follow the Elective Surgery Acuity Scale recommendations adopted by the American College of Surgeons.⁵ This system has 3 tiers of surgical acuity depending on the overall health of the patient (Table 1).

CONCLUSION

I think COVID-19 added a new dimension—an ongoing third World War. Unlike the first and second World Wars, this time the enemies are invisible and can strike from anywhere at any time. The race against COVID-19 will be prolonged; resilience and teamwork are imperative in the coming days. Although the sustainability of this system may be questionable for the long term, it has proven to be efficient in preserving the resources of the hospital so far.

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Table 1. Elective Surgery Acuity Scale Recommendations Adopted by the American College of Surgeons

Tiers	Definition	Location	Example	Action
Tier I	Low-acuity surgery/healthy patient Outpatient surgery Non—life-threatening illness	HOPD Hospital with low/no COVID-19 census	Carpal tunnel release Benign intracranial tumors (meningioma, schwannoma, pituitary adenoma, etc.); Asymptomatic or mildly symptomatic Degenerative spinal pathology (lumbar stenosis, spinal deformity) Deep brain stimulation Microvascular decompression of cranial nerves	Postpone surgery
Tier II	Intermediate-acuity surgery/healthy patient Not life-threatening but potential for future morbidity and mortality. Requires in-hospital stay	HOPD Hospital with low/no COVID-19 census	Low-grade glioma Unruptured aneurysm Arteriovenous malformation Deep brain stimulation for progressive parkinsonism Refractory epilepsy Craniosynostosis	Postpone surgery if possible
Tier III	High-acuity surgery/healthy patient	Hospital	Malignant brain or spine tumors Brachial plexus injury Chronic subdural hematoma Progressive cervical myelopathy	Do not postpone

HOPD, hospital outpatient department.