

COVID-19 AND NEUROSURGERY



American
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The World Health Organization (WHO) has officially classified the novel coronavirus as a pandemic, which means it is now a disease that is prevalent across the entire globe. While this virus and the disease it causes, often referred to as COVID-19, does not appear to affect the brain, spinal cord or peripheral nerves, the large impact it has on patients, caregivers, doctors, nurses and hospitals means that this disease does impact neurosurgeons and their patients.

One significant consequence of the rapid spread of the virus and the respiratory disease it causes is that hospitals in other countries have run out of resources to treat patients. In order to help decrease that possibility in the United States, the American College of Surgeons (ACS), as well as Center for Medicare and Medicaid Services (CMS), have published guidelines for the triage, or ranking in order of priority, of surgical patients. The goal is to decrease the number of surgeries to preserve resources like doctors, operating rooms, ICU beds, etc., for the treatment of COVID-19 patients. The system has three Tiers of surgical acuity further subdividing each Tier into levels, depending on the overall health of the patient. The ACS COVID-19: Guidance for Triage of Non-Emergent Surgical Procedures and the CMS Adult Elective Surgery and Procedures Recommendations are available online. Elective, non-urgent spine surgery has a Tier 2 rating with a recommendation to postpone the procedure, if possible. Other neurosurgical procedures in general have a Tier 3 rating, which means hospitals and doctors should consider proceeding without delay as long as resources are available. While the degree of urgency remains a decision between a surgeon and his or her patient, it is very possible that a surgery might be rescheduled or delayed indefinitely. Some centers might continue to proceed with surgeries, while others might have to delay the same surgeries, depending on exactly how the epidemic is affecting their area and facility.

The ACS recommendations, which have been endorsed by the Center for Medicare and Medicaid Services (CMS), also call for limiting the number of visitors. Patients planning to have surgery need to understand that they might not be able to have visitors post-operatively. Many centers are making accommodations for children and other populations.

Some neurosurgical cases might place surgeons and staff at higher risk of contracting the virus. Specifically, there are concerns that transsphenoidal surgeries (surgery of the brain through the nose) on patients who have the virus have a higher risk of transmission to operating room staff than other surgeries, based on preliminary reports out of China. At this time some authors recommend cancelling elective cases for at least one month or for urgent cases, performing two COVID-19 tests separated by 24 hours with the patient quarantined in the interval between tests before the surgery, with the surgery proceeding only if the results are negative for both tests. For unavoidable (or emergent) surgeries in patients positive for COVID-19 or in whom the status is undetermined, the surgeon and all OR personnel in the surgical suite should use powered air purifying respirators (PAPR), which filter the air being breathed in addition to face shields and other standard personal protective equipment (PPE).

Another reasonable approach is to treat patients who cannot be safely delayed through a transcranial approach, or through the head or skull, instead of approaching through the nose. Brad Zacharia, MD, FAANS, neurosurgeon and director of skull base surgery at Penn State Health, says, "The nasal and oral passages have demonstrated high viral loads and as such non-emergent procedures that require transgression of the nasal/oral mucosa are being delayed until adequate testing and PPE are available. These recommendations have been

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adopted by several national organizations. While endoscopic endonasal procedures have supplanted traditional cranial approaches for most pituitary and many anterior cranial base lesions, one would be remiss not to consider transcranial approaches that are well suited to these pathologies during the COVID-19 pandemic, when appropriate.”

Efforts to curb the spread of the novel coronavirus pandemic also include minimizing face-to-face clinic visits for all doctors and patients, including neurosurgeons and their patients. CMS and many insurance carriers are allowing doctors to bill telephone or computer visits as regular outpatient visits. Many centers are encouraging their providers to convert as many clinic visits as medically appropriate to this new modality in order to allow patients to stay safe at home and allow clinic nurses and staff to help care for COVID-19 patients. A patient and their surgeon might decide this is a safe and efficient way to have an office visit.

The situation regarding COVID-19 is rapidly changing. There are numerous online resources, including those listed below from CMS, ACS, AANS and CNS that are regularly updated. The AANS recommends that neurosurgeons and their patients frequently check these websites for the most up to date information and guidance.

RESOURCES

1. AANS COVID-19 Information Hub
2. ACS COVID-19 and Surgery
3. CMS COVID-19 Information
4. CNS COVID-19 Information Hub

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DISCLAIMER

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