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Neurosurgery at the time of COVID-19: how this pandemic infectious disease is influencing neurosurgical activities and patient management.

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TEXT

Dear Editor,

we have been dealing with COVID-19 infection in Italy during the last few weeks[1–3]. Although this represents a life-threatening medical emergency in our country, all medical and surgical specialties have been influenced. Elective surgical activities have been almost completely interrupted, but for high-priority conditions, such as oncological cases and traumatic injuries, and emergencies.

This unique situation has determined substantial changes in medical assistance, causing inefficiency and disservice[1]. As neurosurgeons, we need to determine the priority class of our patients carefully evaluating their clinical and neurological status. Although this may require physical examinations and instrumental exams. However, because the best way to protect our patients and the entire population from this infection is to prevent contacts[4], visits for those who do not strictly need it.

Northern Italian regions have been dramatically hit by COVID-19, and this has promoted a deeply sensibilization in the rest of the country. Throughout our nation, hospitals and medical centers at large have modified their activities, eventually identifying different solutions to provide assistance, fastidiously following the preventive prescriptions. Telemedicine may represent a solution in such a state of necessity. However, there are some concerns on its practical application in neurosurgery to be disclosed.

Firstly, patients waiting for elective procedures have to be informed of our impossibility to reschedule them. Nevertheless, medical assistance and specific therapies may be needed in the meantime. Therefore, since we are unable to conduct physical examinations on these patients by telephone, their previous neurological status has been retrieved from our repositories, and specific questions on symptoms and functions were administered to rate these patients as stable, worsening or improving. Then, an updated priority list of our waiting patients was released to our departments.

Secondly, patients who are referred to neurosurgery department for urgent clinical and neurological examinations, are usually scheduled within few days for an elective evaluation. However, due to the

aforementioned emergency, we had to limit inappropriate access to our department. To address this relevant issue, we started a telephonic evaluation of cases, identifying a subgroup of experienced neurosurgeons who talked with these patients in order to, either confirm the need for a clinical evaluation or postpone it, prescribing medications or imaging according to the specific case evaluation.

Thirdly, patients who are scheduled for surgery in this period need to result negative to two consecutive swab in 48h[5]. These patients are admitted to dedicated areas where patients waiting for negativity confirmation stay before their destination services. On the other hand, in case of emergency surgeries, dedicated buildings have been converted into surgical and hospitalization departments. Surgeons enter these areas using individual protection equipment (IPE) only, and even surgery is conducted with IPE, to drastically reduce risk for contamination. In this state of necessity, to preserve medical doctor safety is as important as our patient assistance.

Fourthly, patients requiring postsurgical survey for their wound(s) and neurological-clinical status, could be exposed to higher risk for contagious when moving to the hospital. Furthermore, the perioperative period can be associated to higher frailty. Accordingly, we have educated patients on how to disinfect and dress their surgical wound(s). Moreover, we asked our patients to daily send us pictures of the surgical situs, to have a medical survey of its aspect. Although we mostly use resorbable stiches, in the case of non-resorbable ones or metal clips, patients were asked to refer to their general practitioner for the removal, or a house visit was scheduled with one surgeon from our staff.

Lastly, medical staff is continuously exposed to a high-risk for infection. Although the government has released preventive prescriptions mainly focusing on patients and population, hospital workers experience the higher risk. Accordingly, we need to reduce our risk by ourselves. To protect those who are able to help the others, is an as easy as effective concept. On the other hand, our efforts are dedicated to our patients and the entire population, since prevention is the stronger weapon we got. Therefore, we have been searching for a “wise way to risk”, since patients’ needs come first.

In conclusion, we believe that unconventional measures are required to deal with emergencies. Although these may correspond to suboptimal assistance for our patients, an effective compromise must be reached. Even though physical examination and clinical-radiological correlations are fundamental parts of our challenging profession, to make do with less has to be considered in special conditions, such as COVID-19 emergency. Medical workers health need to be preserved as well as our patients' one, or even more.

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NOTES

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