Editorial

Challenges and Potential Solutions of Stroke Care During the Coronavirus Disease 2019 (COVID-19) Outbreak

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A 60-year-old man with known hypertension went to the supermarket after a few days at home during the community quarantine period for the severe acute respiratory syndrome coronavirus 2–induced disease (COVID-19[1]) in a city in South of China. He was wearing an N95 mask. He developed difficulty in breathing and was dizzy. On the way home, he was unsteady and fell. When he arrived home, he found that his mouth was crooked and although concerned, did not go to the hospital because of his fear of the virus. He went to bed and woke up in the morning with a left-sided hemiparesis. He was sent to a nearby hospital where a magnetic resonance brain scan showed acute cerebral infarction and large blood vessel occlusion. However, this hospital like many others across China understandably did not have adequate relevant experts and resources to perform thrombectomy or arrange proper admission because of the fear of COVID-19 and the shortage of physicians resulting from them being sent to areas with high numbers of COVID-19 cases. In-hospital acquisition of COVID-19 is a huge problem based on recent reports.[2,3] His condition continued to deteriorate, and he was transferred to another hospital seeking advanced treatment 2 days later. There are similar stories that patients who have acute stroke have no idea whether to attend hospital and where to go for treatment.

With the outbreak of COVID-19, many extreme measures have been taken to contain the spread of the disease, which include converting general medical wards to quarantine wards for patients who contracted the disease, locking down the communities, suspending routine outpatient clinics, stopping all elective procedures, and providing treatment only for very highly selective cases in many areas across China. Over 40 000 medical professionals from all over the China have been sent to the epicenter of the disease. These clinicians include all subspecialties, including neurologists and anesthesiologists, draining resources for other disease conditions. Normal medical care across the country has been seriously impaired with stroke being at the forefront given that it is the top cause of death and disability in the country. Many stroke centers across China have greatly reduced functioning because of fear of in-hospital cross infection and lack of experienced stroke care experts. Our preliminary available data show the number of thrombectomies in Shanghai decreased by 50% in the first month after the Spring Festival compared with the same period in 2019.

The epidemic situation of the COVID-19 is still continuing, and there may be similar or worse situations around the world in the future. We would like to recommend the following potential strategies to be implemented as soon as possible to ensure that stroke patients do not suffer as a consequence of emergency response to epidemics taking priority:

1. The establishment of stroke networks and care systems able to deliver high-quality emergency stroke care at all times but particularly at times of crisis.
2. The establishment of centralized stroke treatment centers where sufficient stroke care resource can be secured. Although there is a strong case for such centers to be the system of care at all times, it is particularly important at times of medical crisis to have services that can continue to function. As has been reported in England, the prehospital delay can be actually reduced, and thrombectomy rate can be increased significantly by reducing the number of stroke centers in London.[4,5]
3. Inform the emergency medical system and the public that these centers will be protected and will remain fully operational even during crises.
4. Improve education of health professionals and the public, especially those who are at high risk of stroke, to recognize stroke and call emergency medical services immediately to be taken to one of the designated stroke centers so as to avoid significant delay in transferring patient from one hospital to the other.

During the community, lockdown time use online resources to educate and perform consultation for acute and chronically ill patients to improve stroke prevention awareness and the knowledge of infection prevention.

The extent of the COVID-19 epidemic has been so large and widespread that there has been no previous experience that can be used to develop plans for the emergency management of acute stroke treatment (and presumably other acute noninfection-related disease) under such extreme situations. Although the control of the COVID-19 is very important, at the same time, the management of stroke must not be neglected. Over 9000 new stroke cases occur each day in China alone. It cannot be right that treatment for one potentially curable disease is euthanized at the expense of another. With the

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COVID-19 becoming a pandemic as declared by the World Health Organization on March 11, 2020, the world needs to act quickly to have plans ready to deal with the challenges of continuing to deliver high-quality stroke care.

Disclosures

None.

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