Management of acute ischemic stroke under routine infection prevention practices for COVID-19

We greatly appreciate the comments made by Leslie-Mazwi et al.1 As they mentioned, the lack of a 90-day modified Rankin Scale (mRS) was a major limitation of our study. In order to share our first-hand experience as soon as possible during the pandemic, we only reported 7-day outcomes. However, the 90-day follow-up was pre-planned, as we stated in response to peer review comments. As shown in figure 1, a good clinical outcome (mRS ≤2) was seen in 52.9% (9/17) in the pandemic group compared with 39.4% (13/33) in the pre-pandemic group; this difference was not statistically significant (p=0.361). No significant difference was identified for either 90-day mortality (4/17 (23.5%) vs 5/33 (15.2%), p=0.732) or 90-day National Institutes of Health Stroke Scale score (4, IQR 1–12 vs 8, IQR 4–10; p=0.320) in the pandemic and pre-pandemic groups, respectively. However, the small sample size may partially account for this equivalence, therefore future prospective multicenter studies are warranted.

Given that the COVID-19 pandemic is still developing rapidly in some countries, eliminating this disease cannot be achieved in a short period of time. With several recurrent small outbreaks across our country, we have basically entered a stage of routine infection prevention. The National Health Commission has just issued the eighth edition of the guideline for COVID-19 diagnosis and treatment, which has put forward new recommendations on the specific details of routine infection prevention practices.2,3 Our center, where the first confirmed COVID-19 case was diagnosed during the second outbreak in our city in June, continues to improve thrombectomy treatment for patients with acute ischemic stroke (AIS) and takes into account routine infection prevention practices at the same time. In addition to the protected stroke code we reported in the previous article,4 we think the transition ward plays a key role. In our center, the transition ward is actually in a separate building, with relatively independent diagnosis and treatment systems including an independent emergency department, ward, CT examination room, and a negative pressure angiography suite. An intensive care unit with two beds was also set up in the transition ward. We assume all stroke patients with large vessel occlusion are suspected COVID-19 cases until proven otherwise. All diagnosis and treatment for ischemic stroke can be completed in the transition ward without waiting for the results of COVID-19 screening. Patients are referred to a general ward or designated COVID-19 hospitals later according to the results of COVID-19 screening. To date, no nosocomial COVID-19 patients or staff have been infected in our center.

We agree with the opinion of Leslie-Mazwi et al on ‘the elusive denominator’. Recent reports from many countries around the world have shown that the number of patient admissions with AIS has decreased significantly during the pandemic.4–7 Currently, there is no evidence to confirm any reduction in the incidence of AIS during the pandemic. On the contrary, there is evidence that COVID-19 may increase the risk of stroke.8 Aguiar de Sousa et al9 suggested several possible reasons for these missing AIS patients, including strict instructions to stay at home, fear of infection in a medical facility, less detection of stroke onset by family members due to increased social isolation, and the limited ability for emergency medical services to respond to calls. As Leslie-Mazwi et al mentioned, these missing AIS patients may be a potentially huge population, especially when we do not know when the pandemic will really end. At this stage of routine infection prevention, we should pay more attention to ways to find these missing patients with AIS and provide them with a timely diagnosis and treatment.

Figure 1 Distribution of functional outcomes at 90 days. Modified Rankin scale scores are shown for patients in the pre-pandemic and pandemic groups. One patient was lost to follow-up in the pre-pandemic group and four patients were lost to follow-up in the pandemic group, and the data were not imputed. Percentages may not total 100 because of rounding.
Letter to the editor

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ORCID iDs
Tao Wang http://orcid.org/0000-0003-1225-0173
Long Li http://orcid.org/0000-0003-2807-5728
Zheng Wang http://orcid.org/0000-0002-1704-6852
Liqun Jiao http://orcid.org/0000-0003-4982-6295

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