Dear Editor

Cases of a novel viral respiratory illness, corona virus disease (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), were first reported in Wuhan (Hubei, China) in December, 2019[1,2]. Although COVID-19 is primarily a respiratory illness, neurological manifestations have been reported in hospitalized patients and stroke has been observed in 0.9 to 5% of total cases[3,4].

Stroke care systems has been affected in several ways leading to a prolongation in care seeking times and a reduction in reperfusion treatments[5]. There are few studies examining the health effects of stroke and COVID-19 patients in Latin American countries and it is necessary to evaluate stroke care in this countries during the pandemic, where organized transportation, proper triage, and timely access to reperfusion treatments have been lacking[6].

We have conducted a study to describe cerebrovascular disease (ischemic and hemorrhagic) in patients with COVID-19 admitted to reference hospitals in three Latin American cities and determinate factors associated with mortality. Data collection began March 1, 2020 and ended June 30, 2020. The last cases were followed up until August 10, 2020. The eligibility criteria included admitted patients with cerebrovascular events and COVID-19. All patients admitted to the institutions were clinically screened for COVID-19 and respiratory sample was obtained depending on clinical suspicious and confirmed with reverse transcription polymerase chain reaction (RT-PCR) or rapid test. We considered rapid test confirmed with reverse transcription polymerase chain reaction (RT-PCR) or rapid test.

51 patients presented a cerebrovascular event, with an incidence of 2.18% (IC 95% 0.13-4.22). 86.3% were ischemic strokes and 13% presented hemorrhagic.

Funding was received for this study and no sponsors were involved in this study.

Competing Interests
The authors have no competing interest.

Funding
No funding was received for this study and no sponsors were involved in this study.

Authors’ Contributions
MGG pioneered the idea of the research, revised the data, participated in its design and drafted the manuscript. FR pioneered the idea of the research, revised the data, participated in its design and coordination, and performed the statistical analysis. MAV, DG, MDR, LRR, CR revised the data, participated in its design and coordination, and drafted the manuscript. All authors have read and approved the manuscript.

DOI
https://doi.org/10.35434/rcmhnaaa.2022.151.1344

Cross Ref. DOI: 10.35434/rcmhnaaa | OJS https://cmhnaaa.org.pe/ojs

Enfermedad Vascular Cerebral en pacientes con COVID-19: Informe preliminar en 3 ciudades de América Latina

Marla Gallo-Guerrero**; Fernado Roosemberg*; Miguel A. Vences*; Diego Galindo**; Maira Saavedra-Ruiz**; Liliana Rodriguez- Kadota**; Cristina Ramos**

Letter to Editor
Cerebral Vascular Disease in patients with COVID-19: Preliminary report in 3 Latin American cities

DOI
https://doi.org/10.35434/rcmhnaaa.2022.151.1344

Cross Ref. DOI: 10.35434/rcmhnaaa | OJS https://cmhnaaa.org.pe/ojs


FILILATION
2. “Dr. Juan Tanca Marengo” National Oncological Institute, Guayaquil, Ecuador.
3. Hospital Nacional Edgaro Rebagliati Martins, EsSalud, Departamento de Neurología, Lima, Perú.
4. Hospital Base Guillermo Almenara Irigoyen, EsSalud, Departamento de Neurología, Lima, Perú.
5. Unión Médica del Norte Clinic, Santiago de Los Caballeros, República Dominicana.

CORRESPONDENCE
Miguel Angel Vences, MD.
Hospital Nacional Edgardo Rebagliati Martins, EsSalud, Lima, Perú.
Rebagliati 490 St, Jesus María, Lima, Perú.

EMAIL
miguel.vences@upch.pe

DECLARATIONS
Ethics approval and consent to participate
The study was approved by the ethics committee of each institution in May 2020. The ethics committee were: Research Ethics Committee for COVID-19 of the Health Social Security - EsSalud in Peru; Teaching and research department of the National oncology Institute “Juan Tanca Marengo” in Ecuador and Research Ethics Committee of the Unión Médica del Norte Clinic in Dominican Republic.

CONSENT FOR PUBLICATION
Not applicable, because we obtained the information from electronic clinical records and patients were not intervened.

AVAILABILITY OF DATA AND MATERIAL
The datasets generated and analyzed during the current study are available in a supplementary file.

COMPETING INTERESTS
The authors have no competing interest.

FUNDING
No funding was received for this study and no sponsors were involved in this study.

AUTHORS’ CONTRIBUTIONS
MGG pioneered the idea of the research, revised the data, participated in its design and drafted the manuscript. FR pioneered the idea of the research, revised the data, participated in its design and coordination, and performed the statistical analysis. MAV, DG, MDR, LRR, CR revised the data, participated in its design and coordination, and drafted the manuscript. All authors have read and approved the manuscript.
strokes. The median age of patients exhibiting cerebrovascular event was 69 years old (range of 46 to 90). 22% of the patients were under 60 years and 60% were women. 49% of the patients had RT-PCR laboratory-confirmed tests of COVID-19. High blood pressure was the most common antecedent occurring in 56% of patients. The most commonly used medications were antihypertensive and antiarrhythmic drugs which were used by 47% and 11% of patients, respectively.

In regards to COVID symptoms, 47% of patients presented dyspnea, 33% had general malaise, 31% had a cough and 22% had fever. 4% of patients did not present any respiratory symptoms. The average length of hospital stay was 17 days (range of 0-54 days). 46.67% of patients required admission to the ICU. Of the 51 patients, 25.5% of patients received high flow oxygen and required pronation. 43.1% of patients required endotracheal intubation. 19.6% of patients required tracheostomy. 41.1% of intubated patients required ventilation for an average of 15 days. 31% of patients required the use of vasopressors. Neurological (42.2%) and septic (40%) complications were most frequently presented by the patients.

13% of patients had a National Institute of Health Stroke Scale (NIHSS) less than 4, 33.33% had NIHSS scores between 5 and 16 and 30.77% patients had scores between 17 and 25. 15% of patients sought medical attention within 6 hours of symptom onset, 62% sought attention after 6 hours, 13% sought attention after 72 hours and 9% sought attention between 48 and 72 hours. There has been a reduction in reports of minor strokes and TIAs, suggesting that patients with mild symptoms may not seek care**.

In regards to ischemic stroke, 71% of patients presented a compromise of the middle cerebral artery and 17% presented a compromise of the basilar vertebral territory. Only 2% presented hemorrhagic transformation. In our study, none of the patients with stroke and COVID-19 from reference hospitals presented hemorrhagic transformation. In our study, none of the 51 patients exhibited signs of ischemia and cerebrovascular events is associated with the presence of inflammatory parameters. The most commonly used reperfusion treatments have declined during the pandemic**.

This study found high rates of mortality and disability in patients with stroke and COVID-19 from reference hospitals in 3 Latin American cities. During the pandemic, there has been a prolongation of arrival times of stroke patients to emergency rooms. Mortality in patients with both COVID-19 and cerebrovascular events is associated with the presence of inflammatory parameters.

It is important to mentioned that cardiovascular diseases represented a great public health problem with an increased
in morbidity and mortality in the last years [8]. In low- and middle-income countries, stroke is the second leading cause of death and disability before the time of COVID-19 [9,10]. Urgent public education is necessary to reduce the impact of the pandemic in Latin American countries.

BIBLIOGRAPHIC REFERENCES


