PAN AMERICAN JOURNAL OF PUBLIC HEALTH 100 YEARS

Letter to the Editor

Neuro-COVID is a serious complication of SARS-CoV-2 infections and can determine the long-term outcome of COVID-19

Dear editor,

We read with interest the review article by Matar-Khalil about neuro-COVID (1). The author concluded that the exact mechanisms of brain damage from SARS-CoV-2 have not yet been elucidated, and that it is necessary to continue with longitudinal and international research, including studies that include epidemiological, clinical and diagnostic variables to define them and establish their implication in mental health, as well as its long-term consequences (1). The study is appealing but raises concerns that should be discussed.

Neuro-COVID not only includes polyneuropathy, encephalopathy, demyelinating lesions, accident ischemic stroke and Guillain-Barre syndrome, as mentioned in the review, but the spectrum of neurological disease associated with SARS-CoV-2 infection is much broader (1). SARS-CoV-2 infections may be also complicated by intracerebral bleeding; subarachnoid bleeding; venous sinus thrombosis; vasculitis; reversible cerebral, vasoconstriction syndrome; meningitis; immune encephalitis; hypophysitis; ventriculitis; acute disseminated encephalomyelitis; acute, hemorrhagic, necrotizing encephalitis; multiple sclerosis; neuromyelitis optica spectrum disorder; posterior reversible encephalopathy syndrome; epilepsy; myoclonus syndrome; cerebral edema; insomnia; pontine myelinolysis; dystonia; Wernicke encephalopathy; transverse myelitis; mononeuritis or polyneuritis of cranial nerves; myasthenia; myasthenic syndrome; rhabdomyolysis; Parsonage Turner syndrome; small fiber neuropathy; myositis; or dermatomyositis (2).

We disagree with the statement that it was not feasible at the beginning of the pandemic to carry out cerebral imaging (1). All patients with central nervous system disease, disregarding if it was due to SARS-CoV-2 or unrelated to COVID, underwent cerebral imaging but precautious measures were taken to avoid spreading of the virus.

We also disagree with the notion that SARS-CoV-2-related Guillain-Barre syndrome was only reported in Italy (1). It has been a world-wide phenomenon and has been reported from several countries over the world.

Missing is a discussion about the prevalence of neuro-COVID since introduction of the various anti-SARS-CoV-2 vaccinations. There are indications that, at least for SARS-CoV-2-related Guillain-Barre syndrome, its prevalence has declined since introduction of world-wide vaccination campaigns (3).

Overall, the interesting study has limitations that call the results and their interpretation into question. Clarifying these weaknesses would strengthen the conclusions and could improve the study. To further elucidate the pathogenesis of neuro-COVID it is not only necessary to carry out all available and useful investigations but also to carry out autopsies in those patients who decease from neuro-COVID. Of particular interest is if virus RNA can be detected in affected or unaffected brain regions or if there is immunological or inflammatory reaction against the virus.

Conflicts of interest. None declared.

Disclaimer. The authors hold sole responsibility for the views expressed in the manuscript, which may not necessarily reflect the opinion or policy of the RPSP/PAJPH and/or PAHO.

Josef Finsterer
Neurology & Neurophysiology Center, Vienna, Austria. ✉ fifigs1@yahoo.de

Suggested citation Finsterer J. Neuro-COVID is a serious complication of SARS-CoV-2 infections and can determine the long-term outcome of COVID-19. Rev Panam Salud Publica. 2022;46:e191. https://doi.org/10.26633/RPSP.2022.191

A response to this letter is available at: https://doi.org/10.26633/RPSP.2022.192

REFERENCES

1. Matar-Khalil S. Neurocovid-19: efectos del COVID-19 en el cerebro. Rev Panam Salud Publica. 2022;46:e108. https://doi.org/10.26633/RPSP.2022.108
2. Finsterer J. The Broad Spectrum of Neuro-Radiological Abnormalities in Patients Infected with SARS-CoV-2 Supports the Diagnosis of Neuro-COVID-19. Korean J Radiol. 2022;23(1):150-152. doi: 10.3348/kjr.2021.0746.
3. Finsterer J, Matovu D, Scorza FA. SARS-CoV-2 vaccinations reduce prevalence of post-COVID Guillain-Barre syndrome. Clinics. 2022;(in press).

Manuscript received on 5 August 2022; accepted on 25 August 2022. Not peer reviewed.