Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Journal of Clinical Neuroscience 93 (2021) 262–263

Contents lists available at ScienceDirect

Journal of Clinical Neuroscience

journal homepage: www.elsevier.com/locate/jocn

Correspondence

Letter to the Editor regarding "Missed cerebrovascular events during prolonged sedation for COVID-19 pneumonia"

Dear Editor

We read with great interest the article published recently by Bruce et al. [1] "Missed cerebrovascular events during prolonged sedation for COVID-19 pneumonia", where the authors conducted a case series presenting evidence related to the masking of cerebrovascular events during the period of deep sedation in the management of COVID-19 [1]. We thank the authors for presenting these results. However, we would like to make a few comments.

Although the authors acknowledge the limitations of their study, there are very important aspects to debate, as they did in their discussion. First, they mention that computed tomography is a study that can be performed quickly for neurological follow-up, however, it is not so accessible in low and middle-income countries [2], but only in specialized centers of high complexity, and even, due to corruption, economic crisis and deficit of health systems [3], the infrastructure and funding for obtaining new radiological machines is limited [2]. Considering the current collapse of the hospital network due to COVID-19 in this group of countries [4], low-level centers that do not have this infrastructure cannot perform this type of neurological follow-up, which would be a death sentence for this group of patients; not to mention that a large number of patients who develop the severe phenotype of COVID-19 and are in critical condition are not in intensive care units, but in areas adapted for the temporary management of COVID-19 patients.

Faced with this situation, it is necessary to ask whether patients who die under deep sedation, or those who are critically ill where all organ systems cannot be evaluated, ultimately die from neurovascular causes and not from respiratory or other organ complications?. Of course, it is not comparable to evaluate this event in patients with severe COVID-19 phenotype and comorbidities versus those with the same phenotype, but without comorbidities or different ages [5]. However, this question may be the answer to a possible massive under-registration of deaths, where COVID-19 is registered as the cause of death in cases where it is not the final cause of death. In addition, it is necessary to take into account a bias that the authors innocently reveal, and that is the fact that considering that the average diagnosis of major neurovascular injury is 16 days, autopsies performed in patients who died within the average time of evolution during the critical period of this disease, compared to those who extend the time, may exhibit nerve injury [6], which would be compatible with the severity of the manifestations of post-COVID-19 neurological syndrome presented by those patients who recover from a severe condition [7]. Therefore, the presence of nerve injury should be systematically evaluated in all patients with moderate or severe COVID-19 phenotype.

Although there is overwhelming evidence on pathophysiological descriptions [8], correlations between comorbidities and outcomes among the different types of COVID-19 phenotypes [5,6], and even multicenter registries on neurological involvement in this type of patients [9], the information presented in the study by Bruce et al. [1], confirms that there is still much that is unknown about the management, prevention and early diagnosis of COVID-19 complications. Nervous tissue is one of the few tissues that need to be protected with great care, since its affectation represents morbidity, mortality and disability, as well as high costs in neurorehabilitation [7]. Strengthening healthcare systems and re-evaluating COVID-19 management algorithms for critically ill patients, as well as persistent research, are critical to answering the questions that currently haunt the neurological integrity of these patients. Specifically, there is a need for prospective multicenter studies to evaluate the impact of these findings in surviving patients on the presence or severity of post-COVID-19 neurological syndrome.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

None.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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Received 3 May 2021
Accepted 7 May 2021