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Letter to the Editor

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Prospective Studies are Required to Assess the Prevalence/Incidence of Neuro-Covid

Josef Finsterer[1] and Fulvio A Scorza[2]

[1]Klinik Landstrasse, Messerli Institute, Vienna, Austria

[2]Disciplina de Neurociência. Escola Paulista de Medicine/Universidade Federal de São Paulo/. (EPM/UNIFESP). São Paulo, Brasil

***Corresponding author**
Finsterer J, 1Klinik Landstrasse, Messerli Institute, Vienna, Austria. Tel: +43-1-71165; E-mail: fifigs1@yahoo.de

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With interest we read the article by Khedr et al. about a retrospective cohort study of 117 patients with neuro-COVID collected during a three months period in Upper Egypt [1]. It was found that stroke was the most frequent central nervous system (CNS) manifestation of neuro-COVID in this cohort and that anosmia/ageusia was the most frequent peripheral nervous system (PNS) manifestation of neuro-COVID [1]. The study is appealing but raises the following comments and concerns.

The main shortcoming of the study is its retrospective design [1]. Since not all 447 COVID-19 patients admitted during the observational period were systematically seen by a neurologist, the frequency of neuro-COVID manifestations cannot be reliable assessed [1]. We should know how many of the 117 patients were truly seen by a neurologist and how many had an MRI, nerve conduction studies, electromyography, electroencephalography, and cerebro-spinal fluid (CSF) investigations. According to the method section, supplementary investigations were carried out only "if indicated" [1]. Thus, a number of abnormalities may have been missed, particularly in patients with "non-specific neuropsychiatric symptoms".

A further shortcoming is that among the 117 patients with neuro-COVID only in 55 patients the SARS-CoV-2 infection was confirmed by PCR testing. The remaining 62 patients were classified as probable COVID-19 patients, which is why the evaluation should be carried out for both groups separately. Another shortcoming is that the term "convulsions" was not defined in the method section. Thus, we should know if exclusively seizures, myoclonic jerks, or all hyperkinesias were included or not. Furthermore, an explanation should be provided why 47 patients with headache were assigned to the group with non-specific neuropsychiatric symptoms and why 36 patients with headache were included in the neuro-COVID group. Patients with headache require thorough neurological work-up to exclude meningitis/encephalitis, venous sinus thrombosis, dissection, bleeding, or tumour. Thus, we should be informed if all 47 patients with non-specific headache were truly seen by a neurologist. Interestingly, two patients with myasthenia were found. We should be told if myasthenia was newly diagnosed after onset of COVID-19 or if these patients had myasthenia already before becoming infected. In the majority of the patients with COVID-19 and myasthenia so far reported, myasthenia was already present before onset of COVID-19 [2]. Only in few patients was myasthenia probably triggered by SARS-CoV-2 as per the end of February 2021 [3].

The title is misleading as not 439 patients had neuro-COVID but only 117. Overall, this interesting study has several limitations which should be addressed before drawing final conclusions. To assess the prevalence of neuro-COVID prospective studies are inevitable. Such a study should include only COVID-19 patients in whom the infection has been confirmed by PCR.

References

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