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Letter to the Editor

Diagnosing SARS-CoV-2 associated Guillain-Barre syndrome requires cerebro-spinal-fluid studies

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Letter to the Editor.

We read with interest the article by Papri et al. about a 50yo male who was diagnosed with Guillain Barre syndrome (GBS) subtype acute inflammatory demyelinating polyneuropathy (AIDP) according to the National Institute of Neurological Disorders and Stroke (NINDS) criteria upon the clinical presentation and nerve conduction studies (NCSs) 6 weeks after onset of an infection with SARS-CoV-2 (Papri et al., 2021). The patient received immunoglobulines and recovered slowly but almost completely over a period of 6 months (Papri et al., 2021). The study is appealing but raises the following comments and concerns.

A limitation of the study is that the patient had not undergone investigations of the cerebro-spinal fluid (CSF) (Mateen et al., 2011). Diagnosing GBS according to the Brighton criteria requires demonstration of elevated CSF protein in the absence of pleocytosis. CSF studies are also useful to demonstrate elevated levels of inflammatory markers such as interleukin (IL)-6, IL-8, IL-1b, and tumour necrosis factor (TNF)-alpha, as has been previously reported in patients with SARS-CoV-2 associated GBS (Gigli et al., 2020).

We do not agree that "till date, more than 70 cases with SARS-CoV-2 associated GBS" have been reported (Papri et al., 2021). In a recent review about SARS-CoV-2 associated GBS, at least 220 patients as per the end of December 2020 have been collected (Finsterer and Scorza, 2021). Among these patients, several originated from low- respectively middle-income countries (Finsterer and Scorza, 2021). In this study77% had AIDP, 9% AMAN, 7% acute, motor and sensory, axonal neuropathy (AMSAN), and 5% Miller-Fisher syndrome (MFS) (Finsterer and Scorza, 2021).

Missing are nerve conduction velocities (NCVs). We should be informed if they were normal or reduced. AIDP is not only characterised by absent F-wave responses and conduction block, but also by reduced NCV. Decreased compound muscle action potential (CMAP) amplitudes in the median, ulnar, tibial, and peroneal nerves and normal sensory nerve action potentials (SNAPs) in the sural nerve rather suggest acute, motor, axonal neuropathy (AMAN) than AIDP. Arguments for AMAN are the results of NCSs and that in Asia AMAN is more prevalent than AIDP (Yadav et al., 2019).

Missing is the previous individual and family history. We should know if there was pre-existing disease leading to neuropathy that could explain absent tendon reflexes on the second admission, such as diabetes, renal insufficiency, vitamin deficiency, or administration of neuro-toxic drugs. Missing is the information if the patient was regularly taking medication known to be neurotoxic.

There is a discrepancy between paresthesias and normal neurography of the sural nerve. We should know if small fiber neuropathy was considered or if NCSs of sensory nerves other than the sural nerve were carried out and were abnormal.

Missing is an explanation why the patient was still SARS-CoV-2 positive 6 weeks after the first test. Was the patient re-infected or under immune-suppression?

Overall, the presented report has several limitations which challenge the results and their interpretation. The diagnosis GBS should be supported by CSF studies, NCVs provided, and the individual and family history presented. SARS-CoV-2 associated GBS is more common than anticipated.

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No funding was received.

Availability of data

All data are available.

Code availability

Not applicable.

Ethical approval

The research has been given ethical approval.

Patient consent

Not applicable.

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Author contribution

JF: concept, writing literature search, discussion, FS, CS: literature search, critical remarks, discussion.

Declaration of Competing Interest

There are no conflicts of interest.

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