Apply the Brighton Criteria for Diagnosing SARS-CoV-2 Associated GBS Despite Pandemia-Imminent Restrictions

With interest we read the article by Dhamne et al.\(^1\) about a multicentre, observational study of the clinical profile and outcome of SARS-CoV-2 associated Guillain–Barre syndrome (GBS) in 42 patients from the Indian state of Maharashtra collected between March 2020 and November 2020 by contacting all neurologists of the state. It was concluded that COVID-19 may be complicated by both para-infectious and post-infectious GBS, that para-infectious GBS needs more rigorous monitoring than post-infectious GBS, that para-infectious GBS profits from COVID-19 specific treatment, and that routine testing for SARS-CoV-2 should be implemented in the work-up of GBS cases.\(^1\) The study is appealing but has several limitations which raise the following comments and concerns.

The first limitation of the study is that GBS was not diagnosed according to the Brighton criteria.\(^2\) The Brighton criteria are currently accepted as the most appropriate criteria to diagnose GBS. They rely not only on the clinical assessment but also on cerebrospinal fluid (CSF) investigations and on nerve conduction studies (NCSs).

The Brighton criteria also request that alternative diagnoses explaining muscle weakness need to be excluded. However, it remains unclear how critical ill neuropathy or myopathy and other neuromuscular disorders were excluded if not all patients underwent NCS because of investigatory restrictions, as mentioned in the method section.\(^1\)

A criterion to exclude patients from the study was a negative test for SARS-CoV-2. However, according to Table 1, one patient of the para-infectious group tested negative for SARS-CoV-2 and he was also SARS-CoV-2 antibody negative. Thus, this patient should be excluded from the study according to the exclusion criteria. Likewise, one patient from the post-infectious subgroup tested negative for SARS-CoV-2 RNA and SARS-CoV-2 antibodies. Thus, also this patient should be excluded from the study.

SARS-CoV-2 infections are frequently complicated by involvement of the central nervous system (CNS).\(^3\) We should be informed how weakness due to CNS involvement was excluded in the 42 included patients.

According to Table 1, 21 patients of the para-infectious group received intravenous immunoglobulins (IVIG), one patient steroids, and three patients no therapy.\(^1\) We should be told which treatment was applied to patient 26. According to Table 1, 9 patients did not receive any treatment for GBS at all. We should know why 9 patients did not receive any treatment for GBS. Was this due to mild symptoms, spontaneous regression, refusal of therapy, or due to unavailability of treatment?

We do not agree with the notion that patients with para-infectious GBS also profit from specific COVID-19 therapy.\(^1\) There is currently no evidence that remdesivir, favipiravir, tocilizumab,
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or convalescent plasma, are beneficial for GBS. A beneficial effect of this specific COVID-19 treatment on GBS suggests that symptoms and signs that improved are rather attributable to COVID-19 than to GBS.

The delineation between para-infectious GBS and post-infectious GBS is artificial. Negative naso-pharyngeal swab PCR tests do not exclude that there is viremia, or that the virus can be confirmed in other body fluids or compartments. The pathophysiological mechanisms underlying either type of GBS are most likely the same.

Overall, the elegant study has several limitations which challenge the results and their interpretation. GBS should be diagnosed according to the Brighton criteria, delineation between post-infectious and para-infectious GBS should be avoided, and anti-COVID-19 drugs should not be used to treat SARS-CoV-2 associated GBS.

**Ethics approval**
The study was approved by the institutional review board.

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Nil.

**Conflicts of interest**
There are no conflicts of interest.

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