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LETTER TO THE EDITOR

The assessment and interpretation of published data on Guillain–Barre syndrome after SARS-CoV-2 vaccination requires care

We read with interest the article by Shaheen et al.[1] reporting on a systematic review of patients with Guillain-Barre syndrome (GBS) as a complication of SARS-CoV-2 vaccinations. Ten patients were classified as GBS subtype acute, inflammatory, demyelinating polyneuropathy (AIDP) and 17 patients as non-AIDP.[1] Comparison of these two groups revealed differences in most clinical characteristics.[1] The study is excellent but has limitations that should be discussed.

It is incomprehensible that vaccine types Johnson & Johnson (JJV) and Biontech Pfizer (BPV) were statistically compared with regard to AIDP and non-AIDP.[1] In the non-AIDP group, only one patient received JJV, and none in the AIDP group.[1] There was also only a single patient who received BPV in the AIDP group, but none in the non-AIDP group.[1] The *p*-values in table 1 are therefore not comprehensible and unreliable due to missing or low patient number.

A second discrepancy refers to the number of patients admitted to the intensive care unit (ICU). According to the results, two patients were admitted to the ICU, one each in both groups.[1] However, according to table 1 and the results section, 30, respectively six patients required mechanical ventilation.[1] Mechanical ventilation can usually be provided only on the ICU. Therefore, at least six patients should have been admitted to the ICU, not only two. This discrepancy should be solved.

We disagree with the classification of facial palsy as Bell's palsy in 4 patients.[1] Bell's palsy stands for idiopathic facial palsy. In the four patients with facial palsy included in the review, the cause of facial palsy was known and was attributed to SARS-CoV-2 vaccination. Therefore, classification as Bell's palsy is not warranted.

We disagree with the assessment that cerebrospinal fluid (CSF) protein levels are "a critical biomarker for determining the severity and extent of disease".[1] There are GBS patients with high CSF protein content but mild clinical manifestations, and vice versa.[2]

According to table 2, two patients had double vision.[1] Double vision in GBS patients implies that there was either Bickerstaff brainstem encephalitis (BBE) or affection of cranial nerves III, IV, or VI. However, there is neither mention of BBE nor affection of cranial nerves other than cranial nerve VII. An explanation for diplopia in these patients should be provided.

A limitation of the study is that the maximal latency between vaccination and onset of GBS required for inclusion in the study was not defined. There are cases in the literature in which GBS developed >30 days after vaccination. We should know whether or not such cases were also included or excluded.

The abbreviation "BFP" was never spelled out in full, but it can be assumed that the authors mean the brachiofacio-pharyngeal (BFP) subtype of GBS. The BFP subtype of GBS is generally rare, but surprisingly, 15 of the 17 patients with non-AIDP had BFP GBS.[1] This high frequency should be explained.

The table 4 shows the results of the Brighton criteria classification.[1] However, the sum of the patients in column 5 does not agree with the numbers in columns 3 and 4 for diagnostic levels 1–3 of the Brighton criteria. This inconsistency should be clarified.

In the discussion, the term "myotatic reflex" was used.[1] It should be made clear whether the authors mean deep tendon reflexes or autonomic reflexes.

Overall, the interesting review has limitations that call the results and their interpretation into question.

The authors of "Guillain-Barré Syndrome following COVID-19 Vaccination: An Updated Systematic Review of Cases" offered no comments.

Addressing these issues would strengthen the conclusions and could improve the status of the study. Before drawing any general conclusions, the reliability of extracted data should be thoroughly checked and the interpretation of the results should be based on reasonable procedures.

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AUTHOR CONTRIBUTIONS

Josef Finsterer: Formal analysis; validation; writing – original draft; writing – review and editing.

CONFLICT OF INTEREST STATEMENT

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

DATA AVAILABILITY STATEMENT

All data are available from the corresponding author.

ETHICS STATEMENT

The authors confirm that the approval of an institutional review board or patient consent was not required for this work. We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this work is consistent with those guidelines. This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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