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Retrospective Incidence Studies of SARS-CoV-2 Infection/Vaccination Associated GBS Require Appropriate ICD Codes

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LETTER TO THE EDITOR

We read with interest the article by Lee, *et al*. on a Korean nationwide time-series correlation study of the age-specific incidence of Guillain-Barre syndrome (GBS) between 1/2011 and 12/2022, and the incidence of severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) vaccinations and infections from February 2021 to August 2022 [Lee, H. *et al*., 2023]. There was a positive correlation between viral vector-based vaccines and GBS incidence in patients >59y and a positive correlation between mRNA-based vaccines and GBS incidence in patients aged 30-59y.[Lee, H. *et al*., 2023] It was concluded that mRNA-based vaccines should be used for older vaccinees and vector-based vaccines for younger vaccinees [Lee, H. *et al*., 2023]. The study is excellent but has limitations that should be discussed.

The major limitation of the study is that only a single ICD-10 code (G61.0) was used to search for GBS patients in the NHIS database [Lee, H. *et al*., 2023]. GBS is an umbrella term for different subtypes of the disease. The two most important and most common subtypes of GBS are acute, inflammatory demyelinating polyneuropathy (AIDP) and acute, motor, axonal neuropathy (AMAN) [2]. The rarer subtypes of GBS include acute, motor and sensory, axonal neuropathy (AMSAN), Miller-Fisher syndrome (MFS), mono- or polyneuritis cranialis (MNC/PNC), pharyngo-cervico-brachial (PCB) subtype, and Bickerstaff encephalitis (BBE) [Finsterer, J, 2022]. Collecting data using only a single ICD-10 code carries the risk that several of the GBS subtypes have not been included in the assessment and therefore the results will be underestimates and lead to misleading results. MFS is encoded under 61.0 but AIDP and AMAN are encoded under G61.8. Cranial polyneuritis and PCB can be coded under G61.9 and BBE can be encoded under G05.8. GBS could be also encoded under G61.9 [https://www.dimdi.de]. If these subtypes are not coded as GBS or the other ICD codes, they are overlooked and therefore not included in the analysis. After including these additional ICD-codes, the results may differ from those reported in the study.

A second limitation is that only retrospective data were used for the analysis [Lee, H. *et al*., 2023]. The disadvantage of such data is that missing data can no longer be supplemented and no further examinations are possible any longer. There is also the disadvantage that the correctness of the data input can no longer be checked. It is also not guaranteed that the same patient has been recorded more than once. The methods do not explain how double or multiple entries were avoided.

A third limitation of the study is that the comorbidities and current medications of the included GBS patients were not included in the analysis. Since there are risk factors for developing GBS, it is crucial to know which risk factors were present in how many patients.

A fourth limitation is that it did not define how patients with GBS who developed breakthrough SARS-CoV-2 infection despite recent SARS-CoV-2 vaccination were classified. In GBS patients who had both a recent infection and a recent vaccination, has GBS been attributed to one or the other?

If it is claimed that the total number of GBS has been taken into account, care should be taken that all GBS subtypes have actually been recorded using corresponding ICD codes.

REFERENCES

1. Lee, H., Kwon, D., Park, S., Park, S. R., Chung, D. & Ha, J. "Temporal association between the age-specific incidence of Guillain-Barré syndrome and SARS-CoV-2 vaccination in Republic of Korea: A nationwide time-series correlation study."

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Osong Public Health and Research Perspectives, 14.3 (2023): 224-231.
2. Finsterer, J. "Triggers of Guillain-Barré Syndrome: Campylobacter jejuni Predominates." *International Journal of Molecular Sciences*, 23.22 (2022): 14222.
3. "Internationale statistische Klassifikation der Krankheiten und verwandter Gesundheitsprobleme 10. Revision. German Modification. Version 2020." https://www.dimdi.de/static/de/klassifikationen/icd/icd-10-gm/kode-suche/htmlgm2020/ (2023)

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