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Letter to the Editor

Assessing the neurological or psychiatric outcome of COVID-19 requires clear-cut inclusion/exclusion criteria

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We eagerly read the article by Taquet *et al*. about a two-year retrospective cohort study on the risk of 14 neurological or psychiatric complications among 1284437 SARS-CoV-2 infected patients collected from the TriNetX electronic health records network [1]. A transiently increased incidence of mood and anxiety disorders and persisting psychotic disorder, cognitive deficit, dementia, and epilepsy were found [1]. The study is appealing but raises concerns.

Because the inclusion period was 27m, it is obvious that only patients included during the first three months had a two-year follow-up. Therefore, the two-year data are not reliable.

We disagree with the notion that Guillain-Barré syndrome, encephalitis, and nerve, nerve-root, or plexus disorders are outcomes that usually do not recur after resolution [1]. Each of these conditions can recur irrespective if triggered by SARS-CoV-2 or another infectious agent.

Because an individual patient may have several neurological or psychiatric complications, we should know how multiple diagnoses were handled. Was only one diagnosis assessed per patient or multiple? Was the overall number of ICD codes higher than the overall number of patients?

It should be explained how diagnoses that overlap was delineated. Patients diagnosed with cognitive deficit may also have dementia. Patients with a sleep disorder may consecutively have a mood disorder and vice versa. Patients with stroke or encephalitis may develop seizures. How was it guaranteed that a single patient was not assigned for several diagnoses?

An explanation is lacking why only eight neurological disorders were evaluated [1]. The spectrum of neuro-COVID is much broader and additionally includes venous sinus thrombosis, optic neuritis, AHLE, AHNE, ADEM, transverse myelitis, vasculitis, PRES, hypophysitis, opsoclonus-myoclonus, MS, and NMO-SD.

Because COVID-19 is not only a pulmonary disease but may also manifest at onset or later in other organs, [2] it is desirable to know if only patients with pulmonary manifestations or also those with manifestations in other organs were included. This is crucial, as the control group included only patients with respiratory infections [1].

Encephalitis is not a single entity but consists of subtypes such as infectious, immune, Bickerstaff encephalitis, rhomb-encephalitis, limbic encephalitis, cerebellitis, AHLE, AHNE, ADEM, and hypophysitis. Were these subtypes included in the evaluation?

Was there a correlation between the severity of COVID-19 and the duration and outcome of the neurological/psychiatric complications? We should know how many were outpatients, hospitalised, or required ICU treatment.

Because all outcome variables can also stem from COVID-vaccinations, we should know how vaccination side-effects were ruled out.

Declarations

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Consent for publication: was obtained from the patient.

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Code availability: not applicable.

Author contribution: JF: design, literature search, discussion, first draft, critical comments, final approval.

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