Sarcouncil Journal of Internal Medicine and Public Health

ISSN(Online): 2945-3674

Volume- 03| Issue- 06| 2024

Letter to the Editor **Received:** 22-10-2024| **Accepted:** 02-11-2024 | **Published:** 17-11-2024

Effects of SARS-CoV-2 Infection on Patients with Previous Spinal Cord Injuries

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Keywords: SARS-CoV-2 infection, spinal cord injury, SARS-CoV-2 vaccination, comorbidities, outcome.

LETTER TO THE EDITOR

We read with interest the article by Bloom, *et al*., on an electronic survey of 223 community-dwelling patients with a history of spinal cord injury (SCI) to characterise the self-reported health impact of COVID-19 on patients with SCI regarding virus, diagnosis, symptoms, complications of infection, and vaccination [Bloom, O. *et al*., 2023]. It was found that 62% of patients were tested for SARS-CoV-2, that only 14% of those tested, were also positive for SARS-CoV-2, that the most common comorbidities were arterial hypertension and diabetes, that those with comorbidities had worse outcome from COVID-19 than those without, and that 82% of included patients were vaccinated [Bloom, O. *et al*., 2023]. The study is compelling but some points require discussion.

The first point is that the study was conducted using an electronic survey [Bloom, O. *et al*., 2023]. Electronic surveys have several disadvantages. Firstly, it cannot be guaranteed that the addressee is actually the patient in question and not a relative, friend, or carer who is completing the questionnaire, Secondly, missing data cannot be easily completed if a recipient does not complete each of the questions asked. Third, desirable new data can no longer be generated and added to the data set. Fourth, the information provided by the patient cannot be easily verified.

The second point is that only 61% of included patients were tested for SARS-CoV-2 and only 14% of those who underwent testing, were positive [Bloom, O. *et al*., 2023]. Because the study aimed to characterise the self-reported health effects of COVID-19 on people with SCI related to virus exposure, diagnosis, symptoms, complications of infection, and vaccination, those who have not been infected with SARS-CoV-2 should have been excluded from the study.

The third point is that it remained unclear how COVID-19 was diagnosed. We should know how many patients had SARS-CoV-2 infection documented by RT-PCR, how many by antigen testing, and how many by determining serum levels of antibodies against the spike protein.

The fourth point is that the objectives of the study were not clearly defined. Since obviously not all 223 SCI patients were actually infected with SARS-CoV-2, the impact of the infection on their health can only be assessed in those who had experienced a SARS-CoV-2 infection. Therefore, people without documented SARS-CoV-2 infection should be excluded from the study.

The fifth point is that 18 patients had a pre-existing neurological disease other than SCI and six patients had a stroke [Bloom, O. *et al*., 2023]. It is not comprehensible why patients with stroke were not added to the groups of patients with pre-existing neurological disease other than SCI. Since a pre-existing neurological disease can strongly influence the effects of a SARS-CoV-2 infection on well-being and activity, it would have been imperative to exclude patients with a previous neurological disease other than SCI.

In summary, the interesting study has limitations that put the results and their interpretation into perspective. Clarifying these weaknesses would strengthen the conclusions and could improve the study. In order to investigate the effects of SC2I on the well-being of SCI patients, SCI patients should also have undergone an SC2I infection.

REFERENCES

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DOI- https://doi.org/10.5281/zenodo.14176310

Source of support: Nil; **Conflict of interest:** Nil.

Cite this article as:
Finsterer, J. "Effects of SARS-CoV-2 Infection on Patients with Previous Spinal Cord Injuries." *Sarcouncil Journal of Internal Medicine and Public Health* 3.6 (2024): pp 10-11.

Publisher: SARC Publisher