



Abnormal echocardiographic findings after COVID-19 infection: a multicenter registry

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Received: 10 September 2022 / Accepted: 14 September 2022 / Published online: 28 October 2022
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To the editor,

We read with interest the article by Garcia-Zamora S et al. who provided echocardiographic abnormalities in patients after COVID-19 infection [1]. After a careful review of the article, we would like to share some comments that could enhance the understanding of the study.

Regarding the objective of this study, it is understandable to investigate the prevalence of abnormal findings in patients after COVID-19 infection. Echocardiography can be an inexpensive tool in certain places, but this rule is not generalizable to the rest of the world as these could be costly, which would be difficult to justify on asymptomatic and ambulatory COVID-19 patients. Moreover, some of the reasoning given behind performing echocardiographic evaluations for these patients were mainly the presence of symptoms or fear of developing cardiac disease following a COVID-19 infection. However, we believe these reasons alone would be insufficient to undergo such an extensive evaluation and work-up, leading to further incidental findings, which might be unnecessary for asymptomatic patients.

According to the method section, the inclusion criteria did not mention how COVID-19 was diagnosed, and what was the duration of infection. Also, the echocardiographic evaluation took place 15 days to 9 months after the epidemiological discharge. It would be reasonable to understand if epidemiological discharge meant that patients simply are

asymptomatic or that patients had a negative COVID-19 test before echocardiographic evaluation. Furthermore, if the study had the echocardiographic evaluation 9 months after COVID-19 infection, one could reason that the developed abnormalities may be unrelated to COVID-19 infection and not part of the sequelae.

The study mentioned that patients admitted to the ICU requiring mechanical ventilation were included. However, the study's objective was to evaluate echocardiographic changes in ambulatory patients, excluding the ones experiencing a severe disease.

Lastly, in Table 1 Characteristics of the study population according to sex, certain comorbidities were labeled as “cardiovascular disease”, “other cardiovascular diseases”, and “non-cardiovascular disease”. These terms have not been clearly defined and could encompass many meanings, which introduces confusion from the reader's point of view. Also, the table only included comorbidities and no other demographics were provided such as age, gender, ethnicity, the severity of illness, length of stay, and recovery time.

Acknowledgements All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship for this article, take responsibility for the integrity of the work as a whole, and have given their approval for this version to be published.

Author contributions All authors contributed to the study's conception and design. Material preparation, data collection, and analysis were performed by Namrata Singh, Zeina Bani Hani, and Rashed AlRemeithi. The first draft of the manuscript was written by Namrata Singh and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Funding The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

Declarations

Conflict of interest The authors do not have a financial interest or relationship to disclose regarding this letter to the Editor.

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Compliance with Ethics 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.

Financial support This is a non-funded study, with no compensation or honoraria for conducting the study.

Competing Interests The authors have no relevant financial or non-financial interests to disclose.

Ethics approval 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 to participate Not applicable to this manuscript.

Consent to publish Not applicable to this manuscript.

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1. Garcia-Zamora S, Picco JM, Lepori AJ, Galello MI, Saad AK, Ayón M et al Abnormal echocardiographic findings after COVID-19 infection: a multicenter registry. *The International Journal of Cardiovascular Imaging*. 2022 Aug 13;1–9. <https://doi.org/10.1007/s10554-022-02706-9>

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