PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 76583

Title: Very high values of age-adjusted NT-proBNP could help in the early identification and follow-up of children at risk for severe multisystem inflammatory syndrome associated with COVID-19 (MIS-C)

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05086048

Position: Editorial Board

Academic degree: PhD

Professional title: Postdoctoral Fellow

Reviewer's Country/Territory: Germany

Author's Country/Territory: Spain

Manuscript submission date: 2022-03-24

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-16 19:43

Reviewer performed review: 2022-04-18 18:31

Review time: 1 Day and 22 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection

Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

In the manuscript, entitled, "Aged-adjusted NT-proBNP is higher in critically ill patients with multisystem inflammatory syndrome in children", Rodriguez-Gonzalez et al performed a retrospective study including children with MIS-C managed at our institution between April 1, 2020, and February 28, 2022. They compared cardiac parameters between groups of severity based on PICU admission. They compared Z-log-NT-pr cardiac biomarkers values across these groups and on the cardiac dynamics throughout follow-up. All (100%) these cases presented very high (Z-log > 4) levels of NT-proBNP at the time of admission compared to only 5 (50%) patients with non-severe MIS-C (p=0.025). NT-proBNP significantly correlated significantly with high-sensitive Troponin I levels (p=0.045), Ross modified score (p=0.003) and left ventricle ejection fraction (p=0.021).   Though the research work is interesting and, in the near future, can be of importance to scientific community, few minor clarification and modification (stated below) is required prior to publication.   Minor comments: 1. References seems missing in the main manuscript. Entire reference need to added in the manuscript prior to publication 2. Grammar correction need to done at few places 3. In the manuscripts, authors have mentioned the sentence below: Please Informed consent statement: Patients were not required to give informed consent to the study because it did not involve human experimentation. The anonymity of the patients has been guaranteed.   Please be sure, this is okay, prior to publication

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04091933

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Senior Researcher

Reviewer's Country/Territory: Russia

Author's Country/Territory: Spain

Manuscript submission date: 2022-03-24

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-05-13 10:39

Reviewer performed review: 2022-05-22 18:50

Review time: 9 Days and 8 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
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Re-review	[Y] Yes [ ] No
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SPECIFIC COMMENTS TO AUTHORS

The manuscript's topic is very relevant, as it is devoted to the evaluation of age-adjusted NT-proBNP as a biomarker for the initial screening and monitoring of myocardial dysfunction in critically ill pediatric patients with the multisystem inflammatory syndrome (MIS-C). Based on the results of their own retrospective study, the authors showed that Z-log-NT-proBNP values > 4 may be more indicative of concerning echocardiographic findings associated with disease severity, including reduced LVEF and the need for PICU admission for inotropic support. An essential finding of the authors is that NT-proBNP can also be used as a laboratory marker of subclinical LV dysfunction, aiding in the monitoring of cardiovascular complications during post-hospitalization follow-up. This study may have potential clinical implications. The authors correctly described the main limitations of this study, which do not allow us to provide a long-term prognosis and guarantee the absence of medium-term changes in the myocardium in patients with MIS-C. The figures and tables seem quite informative. There is no bibliography, so it is not possible to evaluate self-citation and how up-to-date are the references (there are only numbers; in addition, some citations are not numbered, for example, Penner et al.). The manuscript may be published, however, after revision, which includes primarily the correct use of bibliographic references. It is also proposed to change the title of the manuscript to be more precise and clearer, for example, 'Very high values of age-adjusted NT-proBNP could help in the early identification of children at risk for the severe multisystem inflammatory syndrome'.