

Cardiovascular involvement among collegiate athletes

following COVID-19 infection

Christle C. Guevarra, Nicholas Murray, Daniel Cipriani, Kevin Mailland, Amber Char, Kyle Coffman, Cameron Davis, Frank Truong, Alfred Danielian, Glenn Barnes, Wade Gaal

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Handling editor: Michal Heger Department of Pharmaceutics, Utrecht University, the Netherlands Department of Pharmaceutics, Jiaxing University Medical College, Zhejiang, China

Review timeline:

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1st Editorial decision 7-Dec-2021

Ref.: Ms. No. JCTRes-D-21-00184 Cardiovascular involvement among collegiate athletes following COVID-19 infection Journal of Clinical and Translational Research

Dear Dr. Guevarra,

Reviewers have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you submit the revised manuscript. Also, please ensure that the track changes function is switched on when implementing the revisions. This enables the reviewers to rapidly verify all changes made.

Your revision is due by Jan 06, 2022.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.



Yours sincerely

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: These authors have examined the cardiovascular involvement of collegiate athletes after a COVID-19 infection. Given that the heart is a target for the coronavirus, this is an important topic. Comments:

1. The authors indicate in Table 3 that neither of the two athletes with post-COVID ECG changes had a positive troponin. Was a high sensitivity assay used and the cutoff concentration? Was it troponin T or I? More details are warranted. Were all 49 subjects with return to play troponins within the normal range?

2. The authors should conduct some statistics regarding participating sports?

3. The authors concluded that Hispanic subjects had a lower risk for cardiovascular involvement. A comment could be made that among the general population, Hispanics (and Blacks) in general have higher rates of severe COVID complications than Caucasians.
4. Table 3 shows two individuals with post-COVID ECG changes. It could be mentioned that they had a genetic predisposition towards myocarditis, and that genotyping was not conducted in these two.

Authors' response

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- All troponin levels referenced in this study involved a Troponin T assay from Quest Diagnostics. The cutoff concentration used was 0.01 ng/mL. A high sensitivity Troponin T assay was not used.
- All 49 subjects with return to play troponins were within normal range. The only abnormal findings in the cardiac return to play testing were the two abnormal post-COVID ECG changes.
- Added to the manuscript, which are highlighted in red:
 - Cutoff range and company used for the Troponin T assay in Materials and Methods (Page 7, Line 4).
 - Stating Troponin T instead of troponin throughout the manuscript for clarification (Page 7, Line 4; Table 1, Row 28; Page 10, Line 5; Table 3, Row 1)
 - Stating that the remainder of the cardiac testing was normal outside of the two abnormal ECGs in Results (Page 11, Line 4).

2. The authors should conduct some statistics regarding participating sports?

- A chi-square analysis was performed to see if there any associations between sports type and having symptoms (yes/no) and also sports type and severity of symptoms (none, mild, moderate, severe). We did not find any statistically significant associations between type of sport participation and presence of symptoms; further, the severity of symptoms (none, mild, moderate, severe) reported by athletes was not significantly different across any of the sports (p > 0.05 in all cases).
- Added to the manuscript, which are highlighted in red:
 - The use of Chi-square testing in Materials and Methods (Page 7, Lines 16-18).
 - $\circ~$ Our described findings above in Results (Page 8, Lines 17-20).

3. The authors concluded that Hispanic subjects had a lower risk for cardiovascular involvement. A comment could be made that among the general population, Hispanics (and Blacks) in general have higher rates of severe COVID complications than Caucasians.

Journal of Clinical and Translational Research Peer review process file 08.202201.004



• Our study did not conclude that Hispanic athletes had a lower risk of CV involvement, only that they were less likely to report symptoms when compared with Caucasian and Afro-American athletes.

4. Table 3 shows two individuals with post-COVID ECG changes. It could be mentioned that they had a genetic predisposition towards myocarditis, and that genotyping was not conducted in these two.

Yes, this may be the true that genetics could play a role, but because it was not tested, we cannot presume or make a statement suggesting such. We can only report on what we tested.

2nd Editorial decision 12-Dec-2021

Ref.: Ms. No. JCTRes-D-21-00184R1 Cardiovascular involvement among collegiate athletes following COVID-19 infection Journal of Clinical and Translational Research

Dear authors,

I am pleased to inform you that your manuscript has been accepted for publication in the Journal of Clinical and Translational Research.

You will receive the proofs of your article shortly, which we kindly ask you to thoroughly review for any errors.

Thank you for submitting your work to JCTR.

Kindest regards,

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Comments from the editors and reviewers: