Jundishapur Journal of Microbiology
Volume 16 · Issue 7 · e138125

OPEN PEER REVIEW

Detection of the SARS-CoV-2 Genome in Peripheral Blood Mononuclear Cells of Hospitalized Patients With COVID-19 Infection

Mastaneh Alinezhadi, Maniya Arshadi, Mojtaba Rasti, Niloofar Neisi, Mehdi Parsanahad

SUBMITTED	REVISED	ACCEPTED	DOI
10 Jun 2023	13 Aug 2023	13 Aug 2023	10.5812/jjm-138125

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

Contents

1 Original submission Marzieh Jamalidoust 2
2 Revision 1 3
Authors' reply to reviewers 4
Reviewer and editor comments 6

1 Original submission

1 comment · 2 Jul 2023

Marzieh Jamalidoust Reviewer

MAJOR REVISION 2 Jul 2023

Dear Editor in chief of “Jundishapur Journal of Microbiology”
With special thanks for sending a manuscript for review, the study, entitled “Detection of SARS-CoV2 genome in peripheral blood mononuclear cells of hospitalized patients with Covid 19 infection,” ref 138125, is concerned with assessing the presence or absence of the SARS-CoV-2 genome in PBMC, serum, and/or plasma from hospitalized patients. This study used two methods: real-time PCR and Nested PCR assays.
The manuscript is well written, but it is suggested that it be edited by a native English speaker. I have suggested the following corrections and questions in the hope that they will help improve the article.
Since there is no definitive treatment for COVID-19, it is better not to state in the background of the abstract that the aim of the study is to provide a better treatment.
1- Please indicate in both the abstract and the main text of the manuscript how many patients the 26 samples were collected from.
2- Terms and words should be written in the same form and format; for example, COVID-19 should not be written in two forms in the abstract.
3- At the beginning of the “methods”, the type of study, time of study, and inclusion and exclusion criteria should be stated.
4- Sections 2.5 and 2.6 can be merged.
5- Since age is directly related to the severity and the presence of the virus in the blood (viremia), it is recommended that the patients' age categories be specified, indicating whether they are children, adults, or elderly.
6- Do patients with viral genomes in blood (serum/plasma) samples or PBMCs have any underlying medical conditions?
7- Some sentences are incomprehensible. For example, on page 7, line 19, what is the meaning of “These results are by previous results”?
8- At the end of line 15 on page 8, where a reference number is given, the names of the referenced authors need not be given.
9- The subject under study is so important and interesting that I recommend a more serious discussion in the discussion part of the manuscript.
10- My last comment is that the studies conducted in the field of "the presence of SARS-CoV2 RNA in PBMCs and viremia in Iranian patients" should be considered in terms of ethnicity and genetic similarity.

Best regard

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor,

Our responses to the reviewer's comments are as follows:

Reviewer 1:

Q1: Please indicate in both the abstract and the main text of the manuscript, how many patients the 26 samples were collected from.

R1: Whole the patients were about 70 which was mentioned in the method section, lines 10 and 51.

Q2: Terms and words should be written in the same form and format, for example - COVID-19 should not be written in two forms in the abstract.

R2: SARS-CoV-2 and Covid-19 have two different meanings in the mentioned section. The first one is a virus and the second one is a disease.

Q3: At the beginning of the “methods”, the type of study, time of study, inclusion and exclusion criteria should be stated.

R3: The time and type of the study and inclusion criteria were added to the method section, lines 52 to 54 .

Q4: 2.5 and 2.6 sections can be merged.

R4: 2.5 and 5.6 sections were merged, lines 81 to 94.

Q5: Since age is directly related to the severity and the presence of virus in the blood(viremia), it is recommended to determine the patient's age category and whether it is a child, adult or elderly?!

R5: All the patients in the study were adults. patient's age was determined in the method section, lines 55 to 57.

Q6: Do patients with viral genomes in blood) (serum/plasma) samples or PBMCs have any underlying medical conditions?

R6: No, there was no difference between two groups of patients in clinical symptoms or underlying medical conditions. It seems that negative result in some patients do not reject possibility of their PBMC infection. Based on the other reports, time of sampling could be one of reasons of negative results. Detection of virus in PBMCs approve this fact that these cells can be act as a virus transporter through the body, such as some other viruses.

Q7: Some sentences are incomprehensible. For example, on page 7, line 19 what is the meaning of “These results are by previous results”??

R7: Whole the manuscript were revised for grammatical error and the mentioned sentence was corrected in line 153.

Q8: At the end of line 15 on page 8, where a reference number is given, the name of referenced authors need not be given.

R8: The mentioned author's name was removed in line 169.

Reviewer 2:

Q1: The correct spelling of SARS-CoV-2 infection is “COVID-19” with uppercase letters.

R1: SARS-CoV-2 infection was changed to “COVID-19” in line 35.

Q2: The results section of the abstract is not clear. It’s plain but vague. The reader is unable to get what the result’s point is. It needs to be rephrased.

R2: The result section of abstract was rephrased in lines 15 to 19.

Q3: Please add a ref. for the sentence “lymphopenia could be a result of SARS-CoV-2 infection of lymphocytes which leads to cell death”.

R3: The reference for the following sentence "lymphopenia could be a result of SARS-CoV-2 infection of lymphocytes which leads to cell death” was added in line 36.

Q4: The correct spelling of virus’ name is “SARS-CoV-2”.

R4: The spelling of SARS-CoV-2 and RdRP were corrected in lines 43 and 79.

Q5: As far as I know, when we can interpret a RT-PCR result as a positive that both viral genes were detected. When we detect the only one SARS-CoV-2 gene, it should be interpreted as a “inconclusive” and needs resampling and further evaluation.

R5: All of these samples were detected as positive on swab sample using a real-time pcr kit with N and RdRP genes and then enrolled to study.

Q6: This section was so smart, and presenting great view of the researchers to the study. Do you happen to have any data about the Ct of these positive samples? Or any serial tests in different points presenting the increasing of the negative strand’s copy number?

R6: Unfortunately we had not further accessibility to patients to serial testing.

Q7: If the figure 1 changed to the table. It’d be more academic.

R7: In the mentioned format, the table will has several column with one row or several row with one column. For example, one row for patients number and several column for several symptoms. With respect to reviewer's comment, I think the figure is more Eye-catching.

2 Revision 1

0 comments

No public comments in this round.