

Comments by reviewers:

Reviewer #1:

Specific Comments to Authors: The title reflect the main subject of the manuscript. The abstract summarize and reflect the work described in the manuscript. This article focuses on acute myocardial infarction, and we are concerned about the impact of COVID-19 on the heart. The viewpoint is relatively novel. At the same time of routine treatment, we also pay attention to the treatment of heart. But, the sample size needs to be improved, and it is necessary to elaborate whether both Delta and Omicron strains can cause heart disease.

Author's response: Thank you for your comments. We acknowledge that the sample size of the study is small. We have included all studies pertaining to COVID and MINOCA, published in the literature till January 2022. Under-reporting, as well as the rarity of the condition, could be reasons for only few cases being reported so far. We have mentioned this in the limitations section.

Since all cases were reported prior to the Omicron surge, we can presume that Omicron was not the variant involved in reported cases of MINOCA. However, none of the studies have performed or reported the specific strain of COVID-19 that infected the patients. These points have been added to the discussion section.

Reviewer #2:

Specific Comments to Authors: 1-Regarding results section: Is MINOCA is within the spectrum of COVID-19 or separate entity? -Is the relation of MINOCA to COVID-19 : Association or causation? -I noticed age group is 61.5 years with multiple risk factors ,what about MINOCA in younger patients of COVID without risk factors? 2- Regarding treatment and outcome: -Is there was difference in mortality between who received ordinary treatment and those received antiviral treatment ? I need more explanation -I declared no conflict of interest and I do not review this manuscript before

Author's response: Thank you for your comments. MINOCA is an umbrella term used to describe a number of pathologies characterised by myocardial injury in the absence of significant coronary obstruction. MINOCA can be caused by a number of factors (including COVID-19) and, as we have pointed out, the proportion of MINOCA seems to be higher in patients with COVID-19

At this point it is unclear whether MINOCA is caused by, or merely associated with COVID-19. Answering this question will require a well-designed prospective study adjusted for confounding factors.

We did not find any cases of 'unclassified MINOCA' in younger patients affected by COVID-19 who did not have any other comorbid conditions. However, there may be under-reporting of cases, given the lack of familiarity with this diagnosis, leading to many cases of MINOCA being given alternative diagnoses (such as myocarditis) without complete evaluation. We hope that our review will increase the awareness about this pathology, leading to more reporting of cases in the future.

Due to the same limitations stated above, it is difficult to draw conclusions regarding the effectiveness of anti-viral therapy in MINOCA. None of the patients who died received

antiviral therapy. However, until we have the results of a well-designed prospective randomized control trial, it is difficult to ascertain the benefit of antiviral therapy in COVID-19 patients with MINOCA.

4 LANGUAGE POLISHING REQUIREMENTS FOR REVISED MANUSCRIPTS SUBMITTED BY AUTHORS WHO ARE NON-NATIVE SPEAKERS OF ENGLISH

As the revision process results in changes to the content of the manuscript, language problems may exist in the revised manuscript. Thus, it is necessary to perform further language polishing that will ensure all grammatical, syntactical, formatting and other related errors be resolved, so that the revised manuscript will meet the publication requirement (Grade A).

Authors are requested to send their revised manuscript to a professional English language editing company or a native English-speaking expert to polish the manuscript further. When the authors submit the subsequent polished manuscript to us, they must provide a new language certificate along with the manuscript.

Once this step is completed, the manuscript will be quickly accepted and published online. Please visit the following website for the professional English language editing companies we recommend: <https://www.wjgnet.com/bpg/gerinfo/240>.

Response: The language has been improved and necessary changes made.

5 ABBREVIATIONS

In general, do not use non-standard abbreviations, unless they appear at least two times in the text preceding the first usage/definition. Certain commonly used abbreviations, such as DNA, RNA, HIV, LD50, PCR, HBV, ECG, WBC, RBC, CT, ESR, CSF, IgG, ELISA, PBS, ATP, EDTA, and mAb, do not need to be defined and can be used directly.

The basic rules on abbreviations are provided here:

(1) Title: Abbreviations are not permitted. Please spell out any abbreviation in the title.

Response: Abbreviations have been removed from the title

(2) Running title: Abbreviations are permitted. Also, please shorten the running title to no more than 6 words.

Response: Running title has been shortened.

(3) Abstract: Abbreviations must be defined upon first appearance in the Abstract. Example 1: Hepatocellular carcinoma (HCC). Example 2: Helicobacter pylori (H. pylori).

Response: This has been done.

(4) Key Words: Abbreviations must be defined upon first appearance in the Key Words.

Response: Abbreviations in key words have been expanded

(5) Core Tip: Abbreviations must be defined upon first appearance in the Core Tip. Example 1: Hepatocellular carcinoma (HCC). Example 2: Helicobacter pylori (H. pylori)

Response: This change has been made.

(6) Main Text: Abbreviations must be defined upon first appearance in the Main Text. Example 1: Hepatocellular carcinoma (HCC). Example 2: Helicobacter pylori (H. pylori)

Response: This change has been made.

(7) Article Highlights: Abbreviations must be defined upon first appearance in the Article Highlights. Example 1: Hepatocellular carcinoma (HCC).

Example 2: Helicobacter pylori (H. pylori)

Response: This change has been made.

(8) Figures: Abbreviations are not allowed in the Figure title. For the Figure Legend text, abbreviations are allowed but must be defined upon first appearance in the text. Example 1: A: Hepatocellular carcinoma (HCC) biopsy sample; B: HCC-adjacent tissue sample. For any abbreviation that appears in the Figure itself but is not included in the Figure Legend textual description, it will be defined (separated by semicolons) at the end of the figure legend. Example 2: BMI: Body mass index; US: Ultrasound.

Response: This change has been made.

(9) Tables: Abbreviations are not allowed in the Table title. For the Table itself, please verify all abbreviations used in tables are defined (separated by semicolons) directly underneath the table. Example 1: BMI: Body mass index; US: Ultrasound.

Response: This change has been made.

6 EDITORIAL OFFICE'S COMMENTS

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor:

This manuscript reviews reported cases of myocardial infarction with non-obstructive coronaries (MINOCA) in patients with COVID-19 to explore the clinical features, assessment, and treatment of the disease. Please indicate whether both the Delta and Omicron strains cause heart disease, and whether there is a difference in mortality between those receiving normal treatment and those receiving antiviral treatment.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

Response: Since none of the patients had viral strain testing done, it is unclear which strain of COVID-19 caused MINOCA in these patients. Given that all the cases were reported prior to the delta surge, we can assume that the delta variant was not the cause of MINOCA in the reported cases. Perhaps in the future, as more cases are reported, we will have a better picture.

None of the patients with MINOCA who died received anti-viral therapy. Again, the small sample size the study design constraints prevent us from drawing conclusions at this stage. We hope that as the awareness of MINOCA increases, prospective studies will be done to provide a definite answer to this question.

(2) Company editor-in-chief:

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Critical Care Medicine, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

Response: These changes have been made.

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