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OPEN PEER REVIEW

Clinical and Laboratory Patterns of Multisystem Inflammatory Syndrome in Children Related to Coronavirus Disease 2019 in the West of Iran

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About this report

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1 Original submission

2 comments · 27 Sep 2021 – 18 Nov 2021

Referee 1 Reviewer

MAJOR REVISION 27 Sep 2021

Thank you for the opportunity to review the article entitled "Clinical and Laboratory Pattern of Coronavirus disease 19 Related Multi-System Inflammatory Syndrome in Children".
There are some major concerns about this article.
1. The authors have to specify some information in the title about the location where the study was conducted.
2. No data about laboratory and echocardiographic findings were included in the abstract.
3. The authors should provide the reference for including the administration of antibiotics in the treatment of all patients with MIS-C (lines 43,44).
5. The authors should clearly name which parameters were compared between age and gender groups.
6. Data regarding the past medical history of patients were inadequate (just a sentence in line 95).
7. The authors should mention how long the fever lasts in hospitalized patients.
8. No data regarding clinical manifestations in age and gender groups were provided in the text or figures, and just the final result was described in a sentence (line 109).
9. The authors should provide their laboratory ranges for each result.
10. What is their reference for classifying cardiac dysfunction into mild, moderate, and severe?
11. The authors should mention when the first and subsequent echocardiographic examinations were performed relative to disease onset.
12. Please provide the correct reference for lines 160 and 163. Reference number 5 does not have any information about MIS-C; it was written in 2011.
13. How did they conclude that if the patient fulfills the criteria for KD diagnosis and has evidence of SARS-CoV-2 infection or exposure, we should consider the patient to have MIS-C? Several differences exist between these two; COVID-19 exposure alone will not differentiate the two.
14. No data about troponin, ferritin, and CKmb levels were provided; they are important markers of cardiac involvement and systemic inflammation.

Referee 2 Reviewer

MAJOR REVISION 18 Nov 2021

The authors aimed to determine the clinical and laboratory findings of MIS-C patients for timely diagnosis and to prevent possible complications.
The manuscript is designed well.
All the findings of MIS-C should be compared with the findings of Kawasaki disease and toxic shock syndrome in a table using references in the literature. This table would be useful for readers.

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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 Reviewer

Thanks for your valuable comments. The questions were answered and the manuscript has been edited. [The edited parts in the manuscript are blue so that you can recognize them easier].

I hope the manuscript would be considered for publication now.

Reviewer 1:

Thank you for the opportunity to review the article entitled "Clinical and Laboratory Pattern of Coronavirus disease 19 Related Multi-System Inflammatory Syndrome in Children"

There are some major concerns about this article.

1. The authors have to specify some information about the location where the study was held in the title.

The title changed.

2. No data about laboratory and echocardiographic findings were included in abstract

We added the information.

3. The authors should provide the reference for including the administration of antibiotics in the treatment of all patients with MISc (lines 43, 44).

Line 43 and 44 belongs to introduction (it is not a conclusion from our study) and according to the related reference (number 6) empiric antibiotics is a part of treatment for patients suspected to MIS-C since the accurate differentiation between MIS-C and other infectious diseases like TSS or sepsis is not possible while admission.

5. The authors should name clearly which parameters were compared between age and gender groups.

All clinical manifestations and laboratory findings were compared between age and gender groups but only the parameters that had significant difference between age and sex groups were mentioned in the manuscript. Also it was mentioned that there was no significant difference about most of clinical manifestations.

6. Data regarding the past medical history of patients were inadequate (just a sentence in line 95).

There was no remarkable past medical history in patients except for history of asthma in 4 cases.

7. The authors should mention how long the fever lasts in hospitalized patients?

The patients' clinical manifestations have been recorded once at their first presentation to our hospital and once during the disease period. The presence of fever at each point was recorded and the rate is mentioned in figure 1, but, the exact

data about length of fever is not available now. Also, most of patients received anti-pyretic after admission so, duration of fever cannot be a reliable and accurate parameter among patients' clinical manifestations.

Fever before starting treatment (at first presentation) is a component of diagnostic criteria, and the duration is not of great importance.

8. No data regarding clinical manifestations in age and gender groups were provided in the text nor figures and just the final result was described in a sentence. (Line 109)

There was no significant difference between the groups so we decided to report the total data and avoid repeating similar results.

9. The authors should provide their laboratory ranges for each result.

We added the information.

10. What is their reference for classifying cardiac dysfunction into mild, moderate, and severe?

Classifying to mild, moderate, and severe dysfunction based on ejection fraction was according to the routine clinical records of our hospital. To be more accurate, we omitted "mild, moderate, and severe" terms and we just reported prevalence of the ejection fraction ranges in table 2.

11. The authors should mention when the first and subsequent echocardiography were performed according to disease onset.

We added the information and the related reference.

12. Please provide the correct reference for lines 160 and 163. Reference number 5 does not have any information about MISc, it was written in 2011.

The reference changed (it was a mistake while inserting reference from EndNote).

13. How they concluded that if the patient fulfills the criteria for KD diagnosis and has evidence of SARS-CoV-2 infection or exposure we should consider the patient as MIS-C ?? several differences exist between these two, just a covid 19 exposure will not differentiate these two.

MIS-C is categorized into different groups. One of them is MIS-C overlapping with Kawasaki disease that have very similar manifestations with Kawasaki disease. According to reference number 5 patients who fulfil the criteria for Kawasaki disease and have history of SARS-Cov2 infection or exposure, are considered as MIS-C (overlapping with Kawasaki disease) and treated like other Kawasaki patients. [The main treatment for Kawasaki disease and MIS-C is same]

14. No data about troponin, ferritin, and CKmb levels were provided, they are important markers of cardiac involvement and systemic inflammation.

It was mentioned that "Elevated troponin was not detected in any of the patients" in the results, line124. Data about CPK is also mentioned in table 1.

Routinely Ferritin and CK-MB is not ordered for suspected MIS-C cases in our hospital setting and we do not have the data in this regard.

Reviewer 2:

The authors aimed to determine the clinical and laboratory findings of MIS-C patients for timely diagnosis and to prevent the possible complications.

The manuscript is designed well.

All the findings of MIS-C should be compared with findings of Kawasaki disease and toxic shock syndrome in a table by using references in the literature. This table would be useful for readers.

Although the main aim of is not to compare these 3 diseases but regarding to your great suggestion we added a figure to compare MIS-C with the main differential diagnosis (KD).

2 Revision 1

0 comments

No public comments in this round.