

Peer Review File

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Reviewer A

This case report shared with us a 24-year-old male patient of well-controlled HIV showed non-serious manifestation when co-infecting with COVID-19. The authors concluded that ART is essential for a favorable result. This case fills the gap of our knowledge in patients who co-infect HIV and SARS-Cov-2.

However, this case report is insufficiently supported due to poor evidence-base presentation. Concerns mainly include unique of this case report, writing and reference.

Major revisions to make

1. What's unique of this case report needs highlighting.

Please highlight the most significant difference of this case report in the title, abstract, introduction and discussion part. For example, in the title, add more detailed vital features of this case (e.g. only fever; favourable prognosis, etc.). I have found few similar cases. See PMID: 32426230 and PMID: 32335339. Please clarify the difference by comparing with these two and more similar cases as follows.

Reply 1: Thanks for the reviewer's comments. After discussed together by our authors, we have modified the title, abstract, introduction and discussion part.

(1) The title has modified as "An HIV-infected patient with coronavirus disease 2019 has a favourable prognosis: a case report".

(2) Abstract: In this part, we have elaborated some basic characteristics of the patient that he was a young male, only showing fever after infection with COVID-19, did not aggravation during the course and was cured and discharged finally, highlighted the favourable prognosis of this case.

Changes in the text: On page 2, line 2-9.

(3) Introduction: In this part, we reviewed the new literature which has been published recently and cited some advanced views of the new references, including PMID: 32335339.

Changes in the text: On page 3, line 1-6.

(4) Discussion: According to the reviewer's comments, we have made a great revision of the contents in this section, mainly focusing on the characteristics of this case's history and clinical prognosis.

Changes in the text: On page 5-6, discussion of paragraph 1 and 2.

2. Please provide the latest and profound evidence.

(1) Reference 4 and 6 are both preprint articles which haven't gone peer-review. I would not suggest the authors cite them as there is a high possibility of withdrawing.

(2) Reference 7 is not new now, and it's only an in vitro study. As we know, the latest clinical trial has failed to prove chloroquine's effectiveness.

(3) Some points are incorrect or impolite.

On page 5, line 14~16, 'COVID-19 is a global health threat with unclear mechanisms, unclear treatment strategies, and unclear prognosis' is offending. We do have done a lot of work and do find some mechanisms and are aware of its prognosis.

On page 7, line 13~15, 'since there have no reports on HIV persons with SARS or MERS' is of high risk making mistakes. Please consider citing the two cases.

Reply 2: According to the recommendations of expert, the inappropriate references in the manuscript have been deleted or replaced, and some incorrect or impolite views have been corrected.

(1) We have removed reference 4 and 6 relevant contents cited in the manuscript.

(2) Since this case did not involve other drugs such as remdesivir and chloroquine, the discussion in reference 7 was deleted.

(3) This manuscript was completed in March 2020, when there was indeed a partial lack of understanding of COVID-19 pathophysiological mechanisms and clinical outcomes, particularly in the patient of co-infection HIV and SARS-CoV-2, but later we do have done a lot of work and do find some mechanisms and are aware of its prognosis, especially recently there have been more reports on HIV patients infected with COVID-19, so the previous view of "COVID-19 is a global health threat with unclear mechanisms, unclear treatment strategies, and unclear prognosis" is indeed incorrect and has now been revised and cited in recent references (references 7-9).

Changes in the text: On page 5-6, discussion of paragraph 1.

The view of "since there have no reports on HIV persons with SARS or MERS" is indeed incorrect. We have reviewed the literature again and amended the view (reference 10).

Changes in the text: On page 6, line 3-6.

3. Please share your further hypothesis after comparing this case with the few similar cases. The patients reported in PMID: 32426230 and PMID: 32335339 showed more severe clinical presentations. Importantly, one of the two did control the HIV very well, and the patient was young too.

Reply 3: The difference between this case and the case reported in PMID: 32335339 is that the patients in the literature were found to have HIV and COVID-19 infection with a low CD4+ T cell count at the same time. There is a significant progression and aggravation in the course of the disease, and the condition is controlled after ART. Our case has a 2-year regular ART history and the CD4+ T cell count remains at a normal level, so he showed non-serious manifestation when infected with SARS-CoV-2. We

hypothesis that well-controlled HIV by ART may help reduce clinical symptoms and improve prognosis.

Changes in the text: On page 6, line 13-23.

4. Make a timeline (a figure) by merging figure 1 and table first, then adding information on critical clinical manifestations, medications and clinical outcomes. Please see a great example of such a timeline:

<http://tocr.amegroups.com/article/view/35939/24197>

Reply 4: According to the reviewer's comments, we have made a timeline by merging figure 1 and table 1 referred to PMID: 32206561

(<http://tocr.amegroups.com/article/view/35939/24197>), mainly added treatment programs and clinical outcomes, and streamlined laboratory results, retained the lymphocyte and CD4+ T cell count, which closely related to this case.

Changes in the text: On page 10, Figure 1.

Minor revisions to make

1. Please use the academic name of each medication. Check throughout the manuscript to avoid similar mistakes like 'Fenbide'.

Reply 1: 'Fenbid' is the trade name and has been corrected for the name of the drug chemistry.

Changes in the text: On page 3, line 18.

2. Add detailed information about dosage and duration of each medication.

Reply 2: We have added detailed information about dosage and duration of each medication in Figure 1.

Changes in the text: On page 10, Figure 1.

3. Add information about ART during COVID-19 therapy. Did the patient stop or continue ART during the COVID-19 infection period?

Reply 3: ART was continued throughout the period of the disease.

Changes in the text: On page 4, line 17-18.

4. In the abstract, add critical details of this patient, including age.

Reply 4: In the abstract, we have added critical details of this patient, including age, medical history, treatment process and clinical outcomes.

Changes in the text: On page 2, line 2-9.

5. This manuscript needs English polish by a native speaker.

Reply 5: We have invited professional organizations to polish the manuscript in

English.