DOI: 10.1002/hep.32506

## CORRESPONDENCE



# Letter to the editor: Clinical features of patients infected with COVID-19 with elevated liver biochemistries: A multicenter, retrospective study

## To the editor,

I felt immense pleasure to review the article by Fu et al.<sup>[1]</sup> I was fortunate to read this article, which was enlightening and productive. I concede with the critical epilogue that patients with COVID-19 have significantly increased hepatic biomarkers such as aspartate transaminase and total bilirubin. However, I note the limitations indicated in the study, but some contrasting approaches may improve and strengthen the findings of the study.

Accepted: 22 March 2022

First, in their study, the investigators included COVID-19 patients diagnosed through RT-PCR assay of pharyngeal swab specimens, which only confirms the COVID-19 infection but underestimates the severity of infection in each person. For illustration, a 2020 study included COVID-19 diagnosed patients through RT-PCR, but also evaluated chest radiographs of each person and categorized it into seven stages on the basis of severity of chest radiographs of each person, which might affect the study findings.<sup>[2]</sup> Second, the investigators should have been more concerned about the patient's treatment before admission, as well as antivirals and antibiotics. For example, a study conducted in 2021 detailed some antivirals, corticosteroids, and antibiotics, including antimalarial hydroxychloroquine and the antibody to IL-6 receptors, tocilizumab, as a variable for the patient. As established, both drugs contribute to hepatic toxicity and can result in the elevation of liver enzymes.<sup>[3]</sup> Given that this study is of a retrospective nature, some major concerns arise because of the notable risk of bias in the patient's history and documentation, resulting in unreasonable laboratory findings. As an illustration, a 2020 study found that patients with COVID-19 often had reduced levels of albumin, followed by fluctuations in gamma-glutamyl transferase and aminotransferase. However, the investigators reported normal levels of albumin among most participants.<sup>[4]</sup>

Finally, the investigators should have elaborated on various liver pathologies in patients with coronaviruses,

which have resulted in serious consequences. Similarly, a study conducted in 2021 identified a number of coexisting liver diseases, such as autoimmune hepatitis, cirrhosis, and liver transplant cases, which could have a significant impact on outcomes.<sup>[5]</sup>

**CONFLICT OF INTEREST** Nothing to report.

Ahmad Hayat 🕩

Punjab Medical College, Faisalabad, Pakistan

### Correspondence

Ahmad Hayat, Punjab Medical College, Dera ater ka Mianwal Ranjha Tehsil and District, Mandi Bahauddin, Faisalabad, Pakistan. Email: ahayat1149@gmail.com

### ORCID

Ahmad Hayat https://orcid.org/0000-0001-6038-9562

#### REFERENCES

- Fu Y, Zhu R, Bai T, Han P, He Q, Jing M, et al. Clinical features of patients infected with coronavirus disease 2019 with elevated liver biochemistries: a multicenter, retrospective study. Hepatology. 2021;73:1509–20.
- Wang Y, Liu S, Liu H, Li W, Lin F, Jiang L, et al. SARS-CoV-2 infection of the liver directly contributes to hepatic impairment in patients with COVID-19. J Hepatol. 2020;73:807–16.
- McGrowder DA, Miller F, Anderson Cross M, Anderson-Jackson L, Bryan S, Dilworth L. Abnormal liver biochemistry tests and acute liver injury in COVID-19 patients: current evidence and potential pathogenesis. Diseases. 2021;9:50.
- Kumar-M P, Mishra S, Jha DK, Shukla J, Choudhury A, Mohindra R, et al. Coronavirus disease (COVID-19) and the liver: a comprehensive systematic review and meta-analysis. Hepatol Int. 2020;14:711–22.
- Mohammed A, Paranji N, Chen PH, Niu B. COVID-19 in chronic liver disease and liver transplantation: a clinical review. J Clin Gastroenterol. 2021;55:187–94.

```
© 2022 American Association for the Study of Liver Diseases.
```