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CORRESPONDENCE

Postvaccination COVID-19-related mortality in patients with cirrhosis: Who is the culprit?

To the editor,

I read with great interest the study by John et al.[1] The authors concluded that though patients with cirrhosis can develop breakthrough COVID-19 after full or partial vaccination, the infections are associated with reduced mortality. I commend the authors for undertaking such a rigorous study and would like to share my suggestions on the potential confounders affecting the outcomes.

First, this study's etiologies of liver cirrhosis were not shown in detail.[1] HCV infection is a major cause of liver cirrhosis[2]; hospital admissions of patients with HCV have significantly declined in Spain since 2015 following a wide prescription of oral direct-acting antivirals (DAAs). This reduction was primarily caused by a fall in liver decompensation events.[2] However, DAA therapy was significantly affected since the onset of COVID-19, and the pandemic outbreak was associated with a sharp decrease in DAA prescription dispensing, with levels of dispensing remaining below their prepandemic baseline in April 2021.[3] Doubtless, outcomes of HCV-related cirrhosis could have been severely affected in the COVID-19 era. I suggest that the etiologies of cirrhosis and DAA therapy for HCV-related cirrhosis should be described and analyzed at baseline.

Second, this study's proton pump inhibitor (PPI) exposure was not shown at the baseline.[1] A Veterans Affairs cohort study showed that PPI exposure was associated with an increased risk of infections and decompensation in patients with cirrhosis, which may mediate liver-related mortality.[4] Thus, PPI exposure might be an important potential confounder. PPI use is common in liver cirrhosis, so its effect on liver-related outcomes in this study should be considered.

Third, socioeconomic status in this study was unknown. Socioeconomic status was reported to affect COVID-19-related mortality in Santiago, Chile.[5] Furthermore, John et al.[1] mentioned that vaccination distribution varies by region, as seen in their table 1.[1] Thus, socioeconomic status should be considered regarding COVID-19 mortality in this study.

AUTHOR CONTRIBUTIONS

Zhihui Duan: Conceptualization; methodology; formal analysis; writing–original draft; writing–review & editing.

CONFLICT OF INTEREST

Nothing to report.

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REFERENCES

1. John BV, Deng Y, Schwartz KB, Taddei TH, Kaplan DE, Martin P, et al. Postvaccination COVID-19 infection is associated with reduced mortality in patients with cirrhosis. Hepatology. 2022;76(1):126–38.
2. Ramos-Rincon JM, Pinargote-Celorio H, de Mendoza C, Ramos-Belinchón C, Barreiro P, Gómez-Gallego F, et al. Hepatitis C hospitalizations in Spain and impact of new curative antiviral therapies. J Viral Hepat. 2022;29:777–84.
3. Levengood TW, Aronsohn AI, Chua KP, Conti RM. Dispensing of HIV and hepatitis C antivirals during COVID-19: an interrupted time-series analysis of U.S. national data. Am J Prev Med. 2022. https://doi.org/10.1016/j.amepre.2022.04.024
4. Mahmud N, Serper M, Taddei TH, Kaplan DE. The association between proton pump inhibitor exposure and key liver-related outcomes in patients with cirrhosis: a Veterans Affairs cohort study. Gastroenterology. 2022;163(1):257–69.e6.
5. Mena GE, Martinez PP, Mahmud AS, Marquet PA, Buckee CO, Santillana M. Socioeconomic status determines COVID-19 incidence and related mortality in Santiago, Chile. Science. 2021;372(6545):eabg5298.