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Reply

The letters by Jindal and Lv et al. provided important suggestions to interpret our recent article published in *Hepatology*, which concluded that current and past hepatitis B virus (HBV) infections are not associated with liver injury and mortality in COVID-19.[1] Also, liver injury was shown to be associated with mortality in COVID-19, which echoed our previous study.[2] We have also examined the impact of COVID-19—related medication use on liver injury. Regarding the severity of COVID-19, 295 (6.0%), 34 (9.6%), and 52 (14.5%) patients who had no, current, and past HBV infection were admitted to the intensive care unit; 154 (3.1%), 13 (3.7%), and 26 (7.2%) required invasive mechanical ventilation, respectively. This might reflect the advanced age and burden of comorbidities among patients with past HBV infection compared with the other groups.

In our cohort, 79/5639 (1.4%) patients had liver cirrhosis, which was associated with more mortality.[1] Among 66 patients with available Child-Pugh score, 0 (0%), 1 (10.0%), and 1 (33.3%) patients with Child-Pugh class A, B, and C developed acute liver injury, respectively; 5 (9.4%), 3 (30.0%), and 1 (33.3%) patients died, respectively (Figure 1). Three (5.7%), 1 (10.0%), and 1 (33.3%) patients with Child-Pugh class A, B, and C entered the intensive care unit; 2 (3.8%), 0 (0%), and 0 (0%) of them required invasive mechanical ventilation. Among patients with COVID-19 with current or past HBV infection, 4 (11.1%) patients with cirrhosis and 25 (3.7%) patients without cirrhosis died. These findings agreed with studies that suggested an increased mortality risk in patients with cirrhosis across worsening Child-Pugh class.[3]

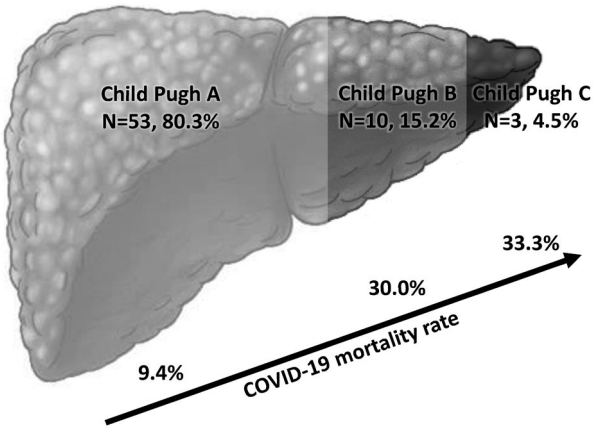

FIGURE 1 The clinical stage of liver cirrhosis in patients with COVID-19 and the corresponding mortality rate

A study showed that patients with alcohol-associated liver diseases are associated with more death than patients with other etiologies of chronic liver diseases.[3] However, the prevalence of alcohol-related liver diseases was relatively low in our local population. Further studies are required to compare the disease severity of COVID-19 in patients infected with HBV with those of other etiologies of chronic liver diseases.

In summary, patients with COVID-19 with HBV-related liver cirrhosis are at risk of adverse clinical outcomes. Close monitoring of liver biochemistries and HBV DNA, use of HBV antiviral therapy, and cautious use of COVID-19 medications with the least hepatotoxicity are important.

CONFLICT OF INTEREST

Dr. Yip consults and is on the speakers' bureau for Gilead. Dr. Grace Wong advises, is on the speakers' bureau for, and received grants from Gilead. She advises and is on the speakers' bureau for Janssen. She is on the speakers' bureau for Abbott, AbbVie, Bristol-Myers Squibb, Echosens, Furui, and Roche. Dr. Vincent Wong advises, is on the speakers' bureau for, and received grants from Gilead. He advises and is on the speakers' bureau for Echosens. He advises 3V-BIO, AbbVie, Allergan, Boehringer Ingelheim, Intercept, Janssen, Novartis, Novo Nordisk, Perspectum Diagnostics,

This is a Reply to Letter to the Editor: Unanswered questions about hepatitis B virus infection in patients with COVID-19 by Lu et al. in Hepatology. 2022;75:229-229. https://doi.org/10.1002/hep.32098

Pfizer, TARGET-NASH, and Terns. He is on the speakers' bureau for Bristol-Myers Squibb and Merck.

AUTHOR CONTRIBUTIONS

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Letter to the editor: Are clinical practice guidelines for hepatitis C by the American Association for the Study of Liver Diseases and Infectious Diseases Society of America evidence based? Financial conflicts of interest and assessment of quality of evidence and strength of recommendations

To the editor,

Financial conflicts of interest (FCOIs) of physicians could bias the tones of recommendations in clinical practice guidelines (CPGs) in the way to benefit commercial entities rather than patients. The USA CPGs for hepatitis C by the American Association for the Study of Liver Diseases (AASLD) and Infectious Diseases Society of America (IDSA) are known for rigorous control of CPG development, although Jefferson et al. reported several discrepancies between the authors' self-reported FCOIs in the CPGs and their articles.[1] Here, we examined recommendations of the AASLD/IDSA CPGs for hepatitis C and FCOIs of the authors.

We considered all CPG authors of AASLD/IDSA CPGs for hepatitis C published on September 29, 2021[2] and extracted data on author names, their FCOIs, level of evidence (LOE), strength of recommendation (SOR), and tone of recommendation (TOR) from the AASLD/IDSA CPGs and webpage as of September 30, 2021. For the USA-based CPG physician author, all categories of payments were extracted from the USA Open Payments Data database from 2014 to 2020. The CPGs categorized LOE into three groups: LOE A (multiple randomized clinical trials and meta-analysis); LOE B (a single randomized trial and nonrandomized studies); and LOE C (expert opinions and case studies). According to recommendation statements, TORs were classified into three types: positive (e.g., "recommend" or "should"); neutral (e.g., recommendation concerning patients eligible for specific treatment); and negative (e.g., "not recommend" or "should not"). SOR was converted into two types: strong (Class I and III SOR) and