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Comment on: Impact of the COVID-19 pandemic on liver disease-related mortality rates in the United States

To the Editor:
We read with great interest the article by Gao et al.,1 who used a national death dataset to determine the impact of the COVID-19 pandemic on people with liver disease in the United States. They found that age-standardised mortality rates for alcohol-related liver disease (ALD) and non-alcoholic fatty liver disease (NAFLD) increased at an alarming rate during the COVID-19 pandemic. Hospitalization for ALD also increased during the COVID-19 pandemic due to increased alcohol consumption. We conducted a relevant analysis with the aim of confirming this observation.

Previous studies reported an increase in alcohol abuse in 2020 due to increased economic insecurity, unemployment, and psychological distress caused by the COVID-19 pandemic.2 In the first year of the pandemic, alcohol sales in the United States increased significantly, from $7.1 billion in 2019 to $9.5 billion in 2020.2 With the increase in alcohol sales, recent studies have also identified an increase in hospitalizations for ALD.3,4 Therefore, we conducted a meta-analysis and aimed to assess the admission growth rate of ALD. Using a pre-designed search strategy, we identified the relevant studies that compared ALD admission rates before and during the COVID-19 pandemic in Embase, Cochrane, and PubMed databases from inception to October 2022. The primary outcome was the pooled admission growth rate of alcohol-associated liver disease.

Admission growth rate of ARLD

| Study name | Statistics for each study | Event rate and 95% CI |
|------------|---------------------------|----------------------|
| Sohal      | 0.511 0.426 0.596 0.262 0.793 |                     |
| Gonzalez   | 0.525 0.400 0.646 0.384 0.701 |                     |
| Shaheen    | 0.300 0.267 0.335 -10.288 1.000 |                     |
|            | 0.436 0.276 0.611 -0.709 0.479 |                     |

Fig. 1. Admission growth rate of alcohol-associated liver disease.

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Authors’ contributions
DB initiated the Letter; DB & HA contributed data; all authors reviewed and commented on the paper.

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ALD. Three studies were included.\(^{3-5}\) Overall, the pooled admission growth rate of ALD was 43.6% (95% CI 27.3–61.4%; \(I^2 = 94.139\%\)) (Fig. 1). We observed a significant increase in the number of ALD admissions during the COVID-19 pandemic compared with previous years.

The COVID-19 pandemic is having a significant impact on the health status of people with ALD. Increased alcohol consumption has the potential to exacerbate liver impairment in patients with existing disease, leading to increased admission rates for ALD. Alcohol consumption is a major contributor to acute-on-chronic liver failure, a common syndrome in patients with underlying cirrhosis that is characterized by acute decompensation of cirrhosis, organ failure, and high short-term mortality. Hence, increased alcohol consumption during the COVID-19 pandemic is bound to increase rates of hospitalization, decompensation of cirrhosis, and mortality.

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Han Zhang, Yan Peng, and Xiaowei Tang declare that they have no conflict of interest.

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Authors’ contributions
Study conception and design: Xiaowei Tang; acquisition of data: Han Zhang; drafting of manuscript: Han Zhang; revision of manuscript: Yan Peng; and final approval of manuscript: Xiaowei Tang.

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More efforts to explore the association between cirrhosis and COVID-19 mortality, and the association between NAFLD and severe COVID-19

To the Editor:

With great interest, we read the two meta-analyses by Wang et al.\(^{1,2}\) published in the Journal of Hepatology in September 2022 and October 2022, respectively.

First, although the authors stated that their meta-analyses were performed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) guidelines in the second paragraph, there is no statement regarding protocol and registration (item 5 of PRISMA) throughout either of the two articles.\(^{3-5}\) The protocol registration is a necessary reporting item for meta-analysis according to the PRISMA statement because the prospective registration could promote transparency and minimize the potential for bias.\(^{5,4}\)

Second, the subject heading (e.g. Medical Subject Headings (MeSH)) is a necessary approach to improve both sensitivity and precision of the search results (Table 1).\(^4\) A model of search strategy including the MeSH approach in PubMed is exhibited in Table 1. However, the authors used free-text only in their search strategy displayed in the second paragraph of each meta-analysis.\(^{1,2}\) In fact, some eligible and crucial studies were missed for the meta-analysis (such as the study by Bajaj et al. published in Gut).\(^{5,6}\) which has already resulted in a significant bias (supplementary information).\(^{3,4,10}\) Furthermore, although the authors reported the test of publication bias in the fourth paragraph,\(^{1,4}\) the results for detecting publication bias are inaccurate and invalid because eligible studies were missing.\(^{3-8}\)

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Author names in bold designate shared co-first authorship.

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