

Peer Review Report

Review Report on Safety and efficacy of SARS-CoV-2 vaccines in patients with chronic liver diseases: a systematic review and meta-analysis

Review, Int J Public Health

Reviewer: Emmanuel Bhaskar

Submitted on: 11 Dec 2022

Article DOI: 10.3389/ijph.2024.1605295

EVALUATION

Q 1 Please summarize the main theme of the review.

The review is on the safety and efficacy of vaccination among patients with chronic liver disease, excluding those with liver transplantation and those with prior COVID infection.

Q 2 Please highlight the limitations and strengths.

Limitations of the review are lack of clarity on characteristics of included studies as relevant in clinical practice. The entire spectrum of chronic liver disease is categorized as a single entity of interest which is not true from a practice point of view.

Strength is a synthesis of core observations in published studies on the topic.

Q 3 Please provide your detailed review report to the authors, structured in major and minor comments.

Major:

1. The authors mention, "vaccination is preventing SARS-CoV-2 infection and death" based on studies that have predominantly assessed surrogate markers of protection or follow-up of vaccine recipients for a very short period. More clarity on the included studies would help the readers understand the review better. The article should clearly state in the introduction or the methods details of the following in the reviewed studies a) characteristics of liver disease (with or without cirrhosis, stage of cirrhosis, the prevalence of additional risk factors for severe COVID-19, etc.), b) period of follow-up assessing the occurrence of infection c) details of the severity of breakthrough infection d) periodicity of antibody assessment (one time versus multiple)

2. In Figure 2, the assessment of neutralizing antibodies is mainly driven by data from Ai et al. In this study, 284 of 437 participants did not have cirrhosis, and a very small number (n=30) had decompensated cirrhosis. Hence the overall effect interpretation is applicable only for less severe liver disease.

3. In Figure 2, the assessment of anti-spike antibody; in 3 of 4 studies, the confidence interval is crossing 1, and hence the test for overall effect ($p=0.02$) should be interpreted with caution.

3. In Figure 2, the assessment of anti-RBD antibody is driven by He et al., who has studied the response among chronic HBV persons. Only 13.3% of participants had cirrhosis (details of decompensation are not mentioned in the study). The overall effect is not generalizable for chronic liver disease in general.

4. In Figure 3, the assessment of COVID infection, hospitalization, and death are based on large retrospective cohort studies. Over 80% of persons have mild disease. Hence this analysis applies only to persons with milder forms of liver disease.

Minor

The review should highlight available real-world data on persons with more severe forms of the liver disease since they form the most significant proportion of death reported in this group. The authors can attempt to extract this information from the reviewed studies and present it as a summary for the readers.

PLEASE COMMENT

Q 4 Does the reference list cover the relevant literature adequately and in an unbiased manner?

Yes

Q 5 Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

Q 6 Does the manuscript cover the issue in an objective and analytical manner

Yes.

Q 7 Was a review on the issue published in the past 12 months?

No.

Q 8 Does the review have international or global implications?

Yes

Q 9 Is the title appropriate, concise, attractive?

Yes

Q 10 Are the keywords appropriate?

Yes

Q 11 Is the English language of sufficient quality?

Yes

Q 12 Is the quality of the figures and tables satisfactory?

Yes.

QUALITY ASSESSMENT

Q 13 → Quality of generalization and summary

Q 14 → Significance to the field

Q 15 → Interest to a general audience

Q 16 → Quality of the writing

REVISION LEVEL

Q 17 → Please take a decision based on your comments:

Major revisions.