INPLASY PROTOCOL

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Support: None.

Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest:
None declared.

SARS-CoV-2 vaccination in chronic liver disease: a systematic review and meta-analysis

Wang, WX[1]; Wang, J[2]; Martini, S[3]; Liu, J[4]; Huang, Y[5]; Wang, FS[6]; Qi, X[7]; Fu, J[8].

Review question / Objective: The objective of this review was to evaluate the efficacy and safety of SARS-CoV-2 vaccines in patients with chronic liver disease.

Condition being studied: There have been some studies on COVID-19 vaccination in patients with chronic liver disease, but no meta-analysis has been performed.

Eligibility criteria: In antibody analysis, eligible studies meet the following criteria: patients enrolled ≥18 years old, seropositivity rates of antibody were reported; the following studies were excluded: (1) insufficient data to calculate the number of patients and healthy controls with antibody positive/negative; (2) duplicate studies or overlapping participants. Eligible studies for adverse reaction analysis should report the overall incidence of adverse reactions in patients with chronic liver disease.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 April 2022 and was last updated on 02 April 2022 (registration number INPLASY202240012).

INTRODUCTION

Review question / Objective: The objective of this review was to evaluate the efficacy and safety of SARS-CoV-2 vaccines in patients with chronic liver disease.

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METHODS

Search strategy: (COVID-19 OR SARS-CoV-2 OR 2019-nCoV) AND (Vaccine OR Vaccination) AND (hepatitis OR fatty liver

OR cirrhosis OR chronic liver disease OR abscess OR liver cancer OR hepatic carcinoma OR hepatocellular carcinoma OR alcoholic liver disease OR non-alcoholic fatty liver disease (NAFLD) OR liver failure OR liver transplantation (LT) OR liver transplant OR liver draft).

Participant or population: Patients with chronic liver disease (including liver cirrhosis, liver cancer, liver transplant recipients).

Intervention: Receive the COVID-19 vaccines.

Comparator: Healthy populations.

Study designs to be included: Studies with healthy controls were screened to calculate the pooled positive antibody rate and OR value of patients with chronic liver disease and healthy people after vaccination with the COVID-19 vaccines. Studies on the overall incidence of adverse reactions in patients with chronic liver disease after vaccination with the COVID-19 vaccine were screened.

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Information sources: PubMed, Embase, and Medline.

Main outcome(s): The OR value of the positive antibody rate in patients with chronic liver disease and healthy people after vaccination with the COVID-19 vaccines.

Additional outcome(s): The positive antibody rate in patients with chronic liver

disease and healthy people after vaccination with the COVID-19 vaccines; the pooled incidence of adverse reactions in patients with chronic liver disease.

Data management: Reference management was performed in Endnote X9.

Quality assessment / Risk of bias analysis: Using the Newcastle-Ottawa quality assessment scale for case-control studies.

Strategy of data synthesis: Performing a meta-analysis using StataSE version 15.

Subgroup analysis: Stratification analyses were performed to examine whether seropositivity rates of antibody were modified by other variables, including antibody detection interval, vaccine type, antibody type to SARS-CoV-2, underlying liver disease.

Sensitivity analysis: None.

Language: English.

Country(ies) involved: China.

Keywords: SARS-CoV-2 vaccination, seropositivity rates of SARS-CoV-2 antibody, meta-analysis, chronic liver disease; safety.

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