MORTALITY RISK OF COVID-19 PATIENTS WITH CHRONIC LIVER DISEASE COMORBIDITY: A META-ANALYSIS

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ABSTRACT

Background: The relationship between pre-existent comorbidities and adverse clinical outcome has been largely investigated. Recent studies have reported the association between preexisting chronic liver diseases and either the risk of infection or the hospitalization of COVID-19 patients. A systematic review and meta-analysis was conducted to investigate mortality risk of COVID-19 patients with chronic liver disease comorbidity.

Subjects and Method: A systematic review and meta-analysis was conducted by PRISMA flow diagram. The articles were collected from Google Scholar, Pubmed, and Science Direct databases. Keywords used “Chronic Liver Disease” AND COVID-19 OR SARS-CoV-2 AND Mortality OR Death. Eligibility criteria were defined using the PICO model as follows, (1) population: COVID-19 patients, (2) intervention: comorbid chronic liver disease, (3) comparison: without comorbid chronic liver disease, and (4) outcome: death. The inclusion criteria were full text, articles were published from year 2020 to 2021, retrospective cohort studies, used English language, and reported adjusted Odds Ratio. Articles that met the criteria were analyzed by Revman 5.3.

Results: 6 cohort studies including 34,176 COVID-19 patients from America, Europe, and Indonesia, were selected for systematic review and meta-analysis. Chronic liver comorbidity increased the risk of mortality in COVID-19 patients (aOR= 3.91; 95% CI= 3.00 to 5.10; $p < 0.001$).

Conclusion: Chronic liver comorbidity increases the risk of mortality in COVID-19 patients.

Keywords: comorbidity, chronic liver, COVID-19, mortality

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