
Risk of Coronary Artery Disease in Patients With Liver Cirrhosis



Coronary artery disease (CAD) and liver cirrhosis are leading global causes of mortality, sharing common risk factors such as obesity, diabetes, and metabolic syndrome. In 2020, CAD affected 244.11 million people and caused 8.95 million deaths, while liver cirrhosis impacted 122.60 million individuals and resulted in 1.32 million deaths in 2017. Liver cirrhosis is often associated with systemic inflammation, hyperactivity of the sympathetic nervous system, and increased cardiac output, which may contribute to CAD development.

Patients with both conditions face unique challenges: cirrhosis increases bleeding risk, limiting the use of antithrombotic therapies, and complicating CAD management. This results in higher rates of adverse outcomes, including mortality and gastrointestinal bleeding. Conversely, CAD worsens outcomes in liver transplant patients with cirrhosis.

Epidemiological data on CAD in cirrhotic patients remain inconsistent due to variations in study populations and diagnostic criteria. Previous meta-analyses have been limited, with one reporting a 12.6% pooled prevalence based on just five studies. As the volume of research on this topic grows, a comprehensive assessment of CAD incidence, prevalence, and associated factors in cirrhotic patients is needed.

CAD is increasingly observed in patients with liver cirrhosis. However, existing data on the incidence and prevalence of CAD in this population are inconsistent, and the association between cirrhosis and CAD remains unclear.

A recent study aimed to address these gaps. A systematic search of PubMed, EMBASE, and Cochrane Library databases was conducted. The incidence, prevalence, and risk factors for CAD in patients with cirrhosis were analysed using a random-effects model. Risk ratios (RR) and odds ratios (OR) with 95% confidence intervals (CI) were calculated to compare CAD outcomes between cirrhotic and non-cirrhotic populations.

A total of 51 studies were included. The pooled incidences of CAD, acute coronary syndromes, and myocardial infarction (MI) were 2.28%, 2.02%, and 1.80%, respectively. Liver cirrhosis was not significantly associated with CAD incidence (RR = 0.77, 95% CI: 0.46–1.28) or MI (RR = 0.87, 95% CI: 0.49–1.57). The pooled prevalences of CAD, acute coronary syndromes, and MI were 18.87%, 12.54%, and 6.12%, respectively. Similarly, cirrhosis was not significantly associated with CAD prevalence (OR = 1.29, 95% CI: 0.83–2.01) or MI prevalence (OR = 0.58, 95% CI: 0.28–1.22). However, significant risk factors for CAD in cirrhotic patients included non-alcoholic steatohepatitis, hepatitis C virus infection, advanced age, male sex, diabetes mellitus, hypertension, hyperlipidaemia, smoking history, and a family history of CAD.

Overall, study findings show that although CAD is prevalent in patients with liver cirrhosis, cirrhosis itself does not appear to significantly increase the risk of CAD. In addition to traditional cardiovascular risk factors, liver disease-specific conditions such as non-alcoholic steatohepatitis and hepatitis C virus infection may contribute to CAD in this population.

Source: [Journal of Clinical and Translational Hepatology](#)

Image Credit: iStock

Published on : Wed, 11 Dec 2024