

NAFLD Linked to Severe COVID Among Younger People

A second meta-analysis found that people with cirrhosis had higher COVID mortality.

April 25, 2023 By Sukanya Charuchandra and Liz Highleyman

Among people younger than 60, [non-alcoholic fatty liver disease \(NAFLD\)](#) was independently associated with more severe COVID-19, according to study results published in the [Journal of Hepatology](#). A [second study](#) found that liver cirrhosis was an independent risk factor for death among people with COVID.

Arising from the accumulation of fat in the liver, NAFLD and its more advanced form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of serious liver disease worldwide. As a result of inflammation, NAFLD can lead to fibrosis, cirrhosis and even [liver cancer](#). There is conflicting evidence about whether NAFLD and cirrhosis are risk factors for severe COVID.

In the first meta-analysis, Haiyan Yang, MD, PhD, of Zhengzhou University in China, and colleagues evaluated links between fatty liver disease and COVID outcomes.

The researchers scanned PubMed, EMBASE, the Cochrane Library and other databases for all eligible articles between December 2019 and September 2022. The meta-analysis included 18 studies that together involved 22,056 cases. Severe COVID included critical illness, intensive care admission, mechanical ventilation and death. People with NAFLD and COVID were compared to those with COVID alone.

The analysis showed that, overall, NAFLD was independently linked to more severe COVID. However, a subgroup analysis based on age revealed that fatty liver disease was strongly and independently linked to severe COVID among people younger than 60, but this association did not hold for people ages 60 or older.

“In conclusion, this meta-analysis of risk factor-adjusted effect sizes indicated that the presence of NAFLD was significantly independently associated with more severe COVID-19 among younger patients rather than older patients,” wrote the researchers.

The second meta-analysis evaluated the association between cirrhosis and COVID mortality. In addition to fatty liver disease, cirrhosis can also result from [hepatitis B](#), [hepatitis C](#), [alcohol-related liver disease](#) and other causes. Immune dysfunction associated with cirrhosis may increase

susceptibility to severe COVID, while, SARS-CoV-2 infection can worsen liver disease, the authors noted as background.

Using similar methods, this meta-analysis looked at studies through August 2022. The researchers identified 29 articles that included data on 6,872,587 individuals with COVID.

The analysis showed that people with cirrhosis and COVID had a significantly increased risk for death compared with those who had COVID without cirrhosis. This association was consistent regardless of patients' age or sex.

The authors noted that the studies included in these meta-analyses generally did not account for the impact of SARS-CoV-2 variants or patients' vaccination status. "Future well-designed studies with comprehensive measurements of potential confounding factors are warranted to verify our findings," they wrote.

Click here to read the [NALFD study](#) and the [cirrhosis study](#) in the Journal of Hepatology.

Click here for [more news about COVID-19](#).