

Triple Infection With HIV, HBV and HCV Raises Risk for Liver Failure

People who are living with all three viruses have a greater likelihood of progressing to end-stage liver disease.

March 13, 2023 By [Sukanya Charuchandra](#)

People who are living with HIV as well as hepatitis B virus (HBV) and hepatitis C virus (HCV) are more likely to develop end-stage liver disease compared with those who have HIV and HCV coinfection, according to study results published in [AIDS](#). What's more, people HIV and HBV coinfection had a lower risk of liver failure than those with HIV and HCV.

Over years or decades, chronic [hepatitis B](#) or [hepatitis C](#) can lead to serious complications, including cirrhosis, [liver cancer](#) and end-stage liver disease (ESLD), or liver failure. Prior research has shown that HIV coinfection can lead to more aggressive liver disease progression.

With little data available on end-stage liver disease and mortality among people with HIV, HBV and HCV, Lars Peters, MD, of the University of Copenhagen, and colleagues conducted a long-term study to better understand the impact of triple infection.

The researchers observed outcomes among adults living with HIV who tested positive for HBV, HCV or both. These individuals were enrolled in the EuroSIDA study ([NCT02699736](#)) and followed from study initiation in January 2001 until they developed end-stage liver disease or died or until the end of December 2020.

The study population included 5,733 people, of whom 4476 (78%) had HIV and HCV, 953 (17%) had HIV and HBV, and 304 (5%) had all three viruses.

Overall, 289 people, or 5% of the study population, developed ESLD during 34,178 person-years of follow-up, for an incidence rate of 8.5 cases per 1,000 person-years. In addition, there were 707 deaths during 34,671 person-years of follow-up, for an incidence rate of 20.4 cases per 1,000.

After adjusting for other factors, people with both HIV and HBV had a lower rate of end-stage liver disease than those with HIV and HCV. People who had all three viruses had a marginally significantly higher rate of ESLD. Across the groups, participants who were followed from 2007 to 2013 had a higher rate of ESLD than those with follow-up starting in 2014, when effective [direct-acting antiviral treatment for hepatitis C](#) became available.

Differences in ESLD incidence between the three groups were most pronounced for people ages 40 and older. After adjustment, there were no significant differences in all-cause mortality across the three groups.

“HIV/HBV-coinfected individuals had lower rates of ESLD and [those with] HIV/HBV/HCV had higher rates of ESLD compared with those with HIV/HCV, especially in those aged more than 40,” wrote the researchers. “ESLD decreased over time across all groups.”

Click here to read the study abstract in [AIDS](#).

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