Antiretroviral Therapy Protects Against Liver Cancer in People With Hepatitis C and HIV

Cirrhosis severity and CD4 cell counts were linked to a greater chance of developing liver cancer.

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Among individuals with both hepatitis C virus (HCV) and HIV who received direct-acting antiviral therapy for HCV, the cirrhosis severity and a higher CD4 T-cell count were linked to a greater risk of developing hepatocellular carcinoma. Conversely, antiretroviral therapy for HIV lowered the risk for liver cancer, according to results published in AIDS.

Studies have found that among people with liver disease driven by hepatitis C, coinfection with HIV can increase the risk of developing severe complications, including advanced cirrhosis and hepatocellular carcinoma (HCC), the most common type of liver cancer.

Viola Guardigni, MD, of the University of Bologna in Italy, and colleagues examined the rate of liver cancer development in individuals with HIV and HCV coinfection and cirrhosis. They conducted a retrospective study of patients at seven hospitals in Northern Italy who began antiviral therapy for HCV between October 2014 and January 2017. The team analyzed factors linked to the occurrence of HCC in a population of 232 individuals.

Over a follow-up period of 55 months, 24 people (10%) developed hepatocellular carcinoma 22.5 months, on average, after beginning antiviral therapy. The risk of developing liver cancer was linked to having a higher Child-Pugh Turcotte score (a measure of cirrhosis severity), HCV genotype 3, a history of prior liver cancer and a nadir, or lowest-ever, CD4 cell count greater than 350. On the other hand, the administration of antiretroviral therapy for HIV was linked to a lower chance of liver cancer. However, having an undetectable HIV viral load did not lessen the risk.

In a multivariable analysis, CD4 cell count was independently associated with liver cancer, with lower nadir cell counts linked to a reduced risk for HCC. (This conflicts with some previous research showing that more advanced immune suppression is associated with worse liver disease.) Cirrhosis severity and being on antiretroviral treatment were also independently linked to liver cancer.

“Our study highlights the importance of a long-lasting follow-up for HCC after HCV eradication,

mostly in those patients with advanced cirrhosis and history of HCC," wrote the researchers. "Furthermore, our data showed a potential role of [antiretroviral therapy] itself (and not of undetectable HIV RNA) in reducing the risk for HCC development."

Click here to read the study abstract in AIDS.

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