Can Pot Prevent Fatty Liver Disease in Those With Hep C and HIV?

A recent study found that daily cannabis use was associated with a reduced risk of the liver condition in this population.

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Among people living with HIV and hepatitis C virus (HCV), fatty liver disease, also known as steatosis, is a serious health concern. Hep C is a liver-based virus that raises the risk of steatosis, and coinfection with HIV is known to exacerbate liver-related health problems in those living with HCV.

A French research team has published a study in the Journal of Viral Hepatology that found that regular pot use is associated with a lower risk of fatty liver disease among those with HIV and HCV, even when the investigators controlled for body weight and other major risk factors for the liver condition.

So does this mean everyone with HIV and HCV should fire up the bong or bake a bunch of brownies? Like any prudent scientist, the new study's research director, Patrizia Carrieri, PhD, a researcher at the French National Institute of Health and Medical Research (INSERM) who is based in Marseille, says the results of her study should be interpreted with caution. Much more research is needed to determine whether there is in fact a causal relationship between using pot and a mitigated risk of fatty liver.

Carrieri's paper also stresses that addressing lifestyle factors such as diet, exercise and alcohol consumption are vitally important when it comes to modulating the risk of fatty liver among HIV/HCV-positive individuals.

Then there is the often-overlooked fact that cosuming pot is, in fact, a form of smoking (provided, of course, that individuals consume it through lighting up). "Smoking, whatever the product," Carrieri notes, "is not good for your health. This is particularly true for people living with HIV and HCV."

An estimated 40 to 67 percent of those living with HIV and HCV have fatty liver disease. The accumulation of fat in liver cells is a potential risk factor for the progression of fibrosis (scarring) of the organ and for liver cancer and may lessen the chance of successfully curing hep C with direct-acting antiviral treatment.

Risk factors for fatty liver particular to those coinfected with HIV and HCV include antiretroviral (ARV) treatment for HIV, especially nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs). Research has indicated that this class of HIV medications is associated with metabolic disorders, including fatty liver. Additionally, alcohol abuse is common in the HIV/HCV-positive population.

Hep C is also associated with a higher risk of insulin resistance and type 2 diabetes. Researchers have firmly established that insulin resistance plays a key role in the development of fatty liver disease.

As for pot's role as a potential mitigating risk factor for fatty liver, a study published in Clinical Infectious Diseases in 2015 found that those with HIV and HCV who used cannabis had a lower risk of developing insulin resistance and steatosis.

Looking to further explore this association, the French group conducted what is known as a cross-sectional study (meaning data was collected at one specific point rather than over time, providing a snapshot effect) among 838 people with HIV and HCV who were members of ANRS CO13-HEPAVIH, an ongoing study of HIV/HCV-coinfected individuals conducted in various French clinics since 2005.

The participants included in the analysis all had data in their medical records about their cannabis use, or lack thereof, as well as results from an ultrasound examination for steatosis. Forty percent of them had fatty liver disease.

Seventy percent of the participants were men.

The participants were asked whether, during the previous month, they used cannabis "never" (53 percent gave this answer), "sometimes" (21.7 percent), "regularly" (11.7 percent) or "every day" (14 percent).

The study authors adjusted their data to account for various risk factors for fatty liver disease, including body mass index (BMI), current or past exposure to the ARV combination tablet Combivir (zidovudine/lamivudine) and hazardous alcohol consumption. After this adjustment, the investigators found that daily cannabis use, compared with never or sometimes using the substance, was associated with a 36 percent reduced likelihood of having steatosis.

Otherwise, being overweight or obese (having a BMI above 20 and 25, respectively), compared with being underweight (a BMI under 18), was associated with a 93 percent increased risk of fatty liver disease. Any exposure to Combivir, compared with no exposure, was linked to a 51 percent increased risk of the liver condition. And hazardous consumption of alcohol, compared with a lack of hazardous usage, was linked to 73 percent increased risk of steatosis.

The study authors acknowledged that their findings about pot's link with a reduced steatosis risk stood in contrast to a cross-sectional study, published in the journal Gastroenterology in 2008, that found that daily use of cannabis was actually associated with an increased risk of the liver condition among those with HCV.

“The inconsistency is perhaps due to the difference in the study populations,” says Carrieri. “That study included individuals living with HCV only, who did not use drugs other than cannabis and who were never treated for HCV. Our study group was coinfected with HIV, and we did not exclude individuals who used drugs or those who had been treated, whether cured or not, for HCV.”

Carrieri and her colleagues’ new paper is limited by its cross-sectional design. Because they did not follow the study cohort over time, they could not analyze how cannabis may be associated with the development or evolution of fatty liver disease. Additionally, the study cannot rule out that steatosis led to greater use of cannabis. The study could also not parse its data to determine how short- versus long-term use of pot may be differently associated with steatosis risk.

“It would be interesting,” Carrieri says, “to conduct experimental research, such as randomized trials, to study the effect of specific cannabinoids contained in cannabis on specific medical conditions, including steatosis, diabetes and obesity.”

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