Can marijuana reduce the risk for developing fatty liver?

Due to shared routes of transmission, co-infection with HIV and hepatitis C virus (HCV) is relatively common. HCV infects and injures the liver. If HCV infection becomes chronic, liver injury gradually spreads throughout this vital organ. Eventually the liver becomes dysfunctional, causing complications including an increased risk for liver cancer, liver failure and death.

People with HIV alone or both HIV and HCV can have an increased risk of developing fatty liver. This is an excess accumulation of fat (steatosis), which can injure the liver. If the cause of fat accumulation in the liver is not addressed, the liver becomes injured and over time this injury caused by steatosis spreads through the organ. This can lead to serious complications.

According to a team of researchers in France, some co-infected people have risk factors that increase their chances of developing fatty liver, including the following:

- exposure to one or more of an older group of anti-HIV drugs nicknamed “d-drugs”—ddC (Hivid), ddI (Videx, didanosine) and d4T (Zerit, stavudine)
- excess intake of alcohol
- the presence of pre-diabetes and diabetes
- infection with a strain of HCV called genotype 3

In a previous study, the French researchers found that some co-infected people who used marijuana over the long-term were at decreased risk for developing pre-diabetes. A similar association has been seen with marijuana use among people without HIV or co-infection with HIV and HCV. The researchers therefore suspected that exposure to marijuana might reduce the risk for fatty liver. To explore this issue, they conducted an observational study with 838 people co-infected with HIV and HCV. The researchers used ultrasound scans of the liver. Participants regularly visited study clinics where additional tests were performed and surveys about marijuana use were undertaken.

The researchers found that participants who disclosed daily marijuana use had a reduced risk of developing fatty liver. A much larger American study with HCV- and HIV-negative people, none of whom consumed excess alcohol, also found that marijuana users had a reduced risk for fatty liver.

Bear in mind

Both the French and American studies were observational in design. Such studies cannot prove “cause and effect”—that is, they cannot prove that exposure to marijuana resulted in a reduced risk for fatty liver. Still, these studies form a good foundation from which robustly designed (and expensive) studies of marijuana can be planned.

In the French study, researchers found that daily marijuana use was the apparently beneficial frequency. However, in the American study, researchers asked less precise questions so it is unclear how much marijuana may be needed to have an effect on preventing fatty liver. Future marijuana studies with co-infected people need to ask at least the following questions:

- Which strains of marijuana were used?
- What was the relative mix of cannabinoids in such strains?
- How was marijuana used—smoked, ingested (edibles) or vapourized?
- How much marijuana was used and how often?
- Did marijuana interact with ART and/or other medicines commonly used by co-infected people?
- Are there differences in the effect of marijuana by gender?

Resources:
French study hints at marijuana’s potential for reducing diabetes risk - CATIE News

Canadian survey compares marijuana use across different conditions - CATIE News

Alcohol, not marijuana, linked to liver injury in women with both HIV and hepatitis C - CATIE News

—Sean R. Hosein

REFERENCES:


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