New Hep C Cases Are Uncommon Among Gay Men on PrEP

HCV incidence in a Canadian study was lower than rates seen in some European countries.

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New cases of hepatitis C virus (HCV) were uncommon among HIV-negative Canadian gay and bisexual men using pre-exposure prophylaxis (PrEP), falling below rates seen in some prior European studies, according to research presented this month in Boston at The Liver Meeting, the annual meeting of the American Association for the Study of Liver Diseases (AASLD).

“This low incidence is reassuring, since studies have shown that risk behavior associated with sexually transmitted infections has gone up,” senior study author Jordan Feld, MD, MPH, of the Toronto Centre for Liver Disease and the University of Toronto, said at a conference media briefing.

Starting in the early 2000s, researchers in Europe began to report clusters of apparently sexually transmitted acute HCV—that is, infections occurring within the past six months—among HIV-positive men who have sex with men (MSM). Similar outbreaks followed in Australia and the United States. Several risk factors have been implicated, including condomless anal sex, fisting, use of sex toys, having other sexually transmitted infections (STIs) and drug use during sex. Although it is often assumed that HCV transmission occurs via sexual activities that involve blood, the virus has also been detected in semen and in rectal fluid.

"HCV infection has emerged as an STI among HIV-positive men who have sex with men over the past decade," lead study author Sahar Tabatabavakili, MD, MPH, also of the Toronto Centre for Liver Disease, said in an AASLD press release. "Generally, HIV-positive [MSM] are disproportionally affected by HCV compared with HIV-negative [MSM], mainly due to the fact that HIV itself might facilitate sexual transmission of HCV in addition to different sexual activities and networks of these groups."

Feld presented the study findings at the conference after Tabatabavakili, who is Iranian, was denied a visa to attend the Boston meeting.

Although sexually transmitted HCV was initially mostly seen among HIV-positive gay and bi men, it has increasingly been reported among HIV-negative men as well, including participants in the U.K. PROUD and French Ipergay PrEP studies and the Kaiser Permanente San Francisco PrEP program.

In 2017, researchers reported an unexpectedly high HCV prevalence (total infections) rate of nearly 5% among HIV-negative gay and bi men taking PrEP in Amsterdam. The following year, they reported an HCV incidence (new infection) rate of about 1% in this group—similar to rates for HIV-positive men.

PrEP guidelines from the Centers for Disease Control and Prevention recommend that people should be tested for HCV as well as bacterial STIs before they start PrEP. However, unlike testing for HIV and other STIs, HCV testing is not included in the recommended quarterly monitoring recommended for people on PrEP. AASLD guidelines recommend HCV testing at least annually at follow-up PrEP visits, with more frequent testing if warranted based on sexual activity or drug use.

The researchers looked at new hepatitis C cases among PrEP users at the University Health Network HIV Prevention Clinic in Toronto. This retrospective analysis included all HIV-negative people evaluated for PrEP between October 2014 and September 2019. Among these 344 individuals, 89% identified as male, and 86% were men who have sex with men. Three quarters were white, and the median age was 35. A quarter said they had ever injected drugs, which is higher than the rate usually reported in populations of gay and bi men.

Participants were tested for HCV at study entry and then every three to six months or at any time they had elevated ALT liver enzymes, a sign of liver inflammation that can signal newly acquired viral hepatitis. They also received the recommended tests for chlamydia, gonorrhea and syphilis every three months.

At baseline, five people (1.8%) were found to be positive for HCV antibodies (showing that they had ever been infected) and HCV RNA (indicating current infection). This is more than double the rate of about 0.7% in the Canadian general adult population.

Three people were previously aware that they had hepatitis C, while two were diagnosed for the first time at PrEP screenings. None of them started PrEP, and the two newly diagnosed individuals were lost to follow-up before they could be treated for hep C.

A total of 199 people started Truvada (tenofovir disoproxil fumarate/emtricitabine) for PrEP. After that, they were required to visit the clinic every three months to renew their prescription and receive HIV, STI, HCV and liver enzyme tests.

The incidence of STIs was high, at 49.2 cases of chlamydia, 36.3 cases of gonorrhea and 5.2 cases of syphilis per 100 cumulative years of follow up. New HCV cases were much less common. Only two people, both of them men who have sex with men, were diagnosed with acute HCV infection, for an incidence rate of 0.7 per 100 years of follow up. No one was newly diagnosed with HIV.

One man, age 66, acquired HCV after being on PrEP for almost 19 months. He reported no history of injection drug use, had multiple sex partners (one of whom was known to be HCV positive) and had multiple other STIs. The second man, age 24, acquired HCV after being on PrEP for 14 months. He reported occasional recreational drug use but no drug injection. He also had multiple sex partners and recurrent STIs. Neither of the men reported any symptoms of hepatitis C, and both

had normal ALT levels. Both were treated with direct-acting antivirals and cured.

The rate of preexisting hepatitis C among people starting PrEP in this study was at the low end of the range previously reported in similar populations (about 2% to about 5%). The rate of HCV acquisition was in line with those previously reported for HIV-negative gay and bi men in North America but lower than those reported in Europe (ranging up to 2.9 per 100 years of follow-up in one Belgian study).

The researchers suggested that this variation might be attributable to different patterns of disease transmission. For example, Feld said, drug use associated with sex (sometimes called chemsex) may be more common in Europe compared with Canada. However, because only two people acquired HCV in this analysis, the researchers were unable to assess specific risk factors.

Based on these findings, the researchers stressed that baseline HCV testing for people starting PrEP is “clearly required.” They also recommended repeat testing because people with newly acquired HCV may not have symptoms or abnormal ALT levels that would signal infection. However, the optimal frequency of repeat HCV testing for PrEP users remains unclear.

"The low incidence of HCV infections despite very high rates of other STIs suggests that sexual transmission of HCV is uncommon in HIV-negative MSM PrEP users,“ the study authors concluded. ”Cost effectiveness analyses will be required to determine the optimal frequency of serial HCV testing and whether risk-based or universal testing is the preferred strategy in PrEP clinics."

Click here to read the study abstract.

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