Sexual Transmission of Hepatitis C Is Uncommon Among PrEP Users

Increased HCV testing and treatment for both HIV-positive and HIV-negative gay and bi men could help eliminate hep C.

March 23, 2021 By Sukanya Charuchandra and Liz Highleyman

Compared to other sexually transmitted infections, hepatitis C virus (HCV) seems to be infrequently spread via sex among men on HIV pre-exposure prophylaxis (PrEP), according to study results published in Clinical Gastroenterology and Hepatology. However, studies presented at the recent Conference on Retroviruses and Opportunistic Infections (CROI) showed that HIV-positive and HIV-negative men do acquire hepatitis C via sex, and increased HCV testing and treatment could further hep C elimination efforts.

It is well established that HCV can be sexually transmitted among HIV-positive gay and bisexual men, though sexual transmission among heterosexuals is rare. Studies of PrEP users—who are regularly tested for sexually transmitted infections (STIs)—have shown that HCV transmission among HIV-negative men occurs more often than previously thought.

Jordan Feld, MD, MPH, of the University of Toronto University Health Network, and colleagues assessed the prevalence of hepatitis C and bacterial STIs among people receiving PrEP. The team analyzed patients seen at the University Health Network HIV Prevention Clinic between 2012 and 2019. They tested mucosal, anal and blood samples for HIV, STIs and antibodies against HCV.

Antibodies show whether a person has ever had hepatitis C; about a quarter of people who acquire HCV clear the virus naturally without treatment. But having hep C does not lead to immunity, so it's possible to contract the virus again (known as reinfection).

Of the 344 individuals on PrEP, 86% were men who have sex with men. When they started PrEP, only five participants tested positive for hepatitis C.

Within this group, 109 individuals who tested negative for hepatitis C were followed for a total of 282 person-years (PY). In this group, two new hep C cases were noted, resulting in an incidence rate of 0.7 per 100 PY for primary, or first-time, HCV infection. Both of these individuals were men who have sex with men, with one reporting recreational drug use as well. They were both asymptomatic when diagnosed.

In contrast, the incidence rates for other STIs were much higher: 49.2 per 100 PY for chlamydia, 36.3 per 100 PY for gonorrhea and 5.2 per 100 PY for syphilis. So sexual transmission of hepatitis C appears to be much less common than transmission of bacterial STIs among gay and bi men on PrEP.

“Performing routine risk-based HCV surveillance among PrEP users should be evaluated,” wrote the researchers. “The high incidence of STIs in this population indicates a vital role for periodic STI monitoring in those receiving PrEP.”

A study presented at CROI found that the prevalence of active HCV infection among HIV-positive people in Spain was 2.2% at the end of 2019, a 90% drop from the rate in 2015. A large decline in new cases of hep C was also recently reported among HIV-positive gay and bi men in London.

Of the 1,316 people (largely gay and bi men) tested in this nationwide study, 376 (28%) were found to be HCV antibody positive. Of these, 55 cleared the infection naturally and 291 were successfully treated. Overall, 5% of study participants had liver cirrhosis, rising to 23% among those cured of hep C.

Juan Berenguer, MD, PhD, and colleagues with the Spanish GeSIDA 8514 Study Group concluded that increased use of direct-acting antiviral treatment for hep C was likely the main reason for the decrease, but cautioned that HCV-related liver cirrhosis remains a significant problem.

However, a German study presented at CROI did not see a change in HCV incidence rates in the German NoCo cohort, which includes more than 8,000 HIV-positive men who have sex with men as well as HIV-negative men on PrEP. What’s more, the researchers saw a substantial rate of HCV reinfection (19.1 per 100 PY). People with reinfection were more likely to be older, HIV-positive and report methamphetamine or ketamine use. Patrick Ingiliz, MD, of the Center for Infectiology in Berlin, and colleagues suggested that delayed HCV treatment and insurance barriers may be a major contributing factor to ongoing HCV transmission in this population.

Finally, Natasha Martin, PhD, of the University of California, San Diego, and colleagues developed a mathematical model to help optimize HCV testing strategies for gay and bi men in the United States. They found that HCV elimination could be achieved in a cost-effective way by increasing the frequency of HCV screening beyond what is currently recommended: to every six months for HIV-positive men, annually for HIV-negative men on PrEP and at the time of testing HIV positive for HIV-negative men not on PrEP.

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