Hepatitis C Transmits Sexually in HIV-Positive Gay Men

This silent epidemic has largely traveled under the radar, seriously endangering the health of HIV-positive gay men and raising the question of just how safe serosorting really is.

June 1, 2014 By Benjamin Ryan

A New York physician begins noticing a troubling pattern of what appears to be sexual transmission of a rapidly harmful virus among men who have sex with men (MSM). The doctor's preliminary search for more information leads him to other physicians and scientists in the United States and abroad who have also started recognizing the pattern. He runs into skepticism along the way. Before long, it's clear that a new, troubling route of disease transmission has emerged.

No, this isn't a history piece about the early days of the AIDS crisis, it's an article about the present day. Since around the turn of the 21st century, increasing evidence of a new epidemic in the gay community has surfaced: HIV-positive MSM are acquiring hepatitis C virus (HCV) sexually, and at alarming rates.

The physician in question is Daniel Fierer, MD, an infectious disease specialist at Mount Sinai in New York City, who, since first observing this epidemiological trend in 2005, has gone on to become one of the nation's few experts on sexually transmitted hep C in the HIV-positive MSM population. These days he is frustrated to see himself as something of a Cassandra: sounding the alarm and challenging the assumption that sexual transmission of hep C is rare while others in his field may cling to the traditional risk factor orthodoxy that puts contaminated needles front and center.

Referring to the famous Jaws II tag line, the ironically wry Fierer says, "'Just when you thought it was safe to go back in the water' is a really important idea that I wish more of my colleagues thought about. We get this sort of arrogance of thinking that we understand how nature is working right now. And we are constantly chastened by nature."

Swiss researchers have reported that the rate of new hep C infections among MSM increased by a factor of 18 between 1998 and 2011. In New York City, according to surveillance data on the HIV-positive population, the proportion of new reported hep C cases that were among MSM rose from just 7 percent in 2000 to 24 percent in 2010. The hep C prevalence among HIV-positive MSM attending a large sexually transmitted infection clinic in Amsterdam shot up from 5.6 percent in

1995 to a high of 20.9 percent in 2008.

C. Bradley Hare, MD, the director of HIV care and prevention at Kaiser Permanente Medical Center in San Francisco, reports, “We’ve really seen an explosion of these infections.”

Nevertheless, awareness is minimal.

“I have HIV-infected providers catching hepatitis C,” says Lynn E. Taylor, MD, an HIV and hepatitis C specialist in Providence, Rhode Island, and an assistant professor of medicine at Brown University. “They’re health care workers, and they’re shocked and surprised. ‘How did I get this?’ Because the word is not out in the United States and around the world that you can catch hep C from unprotected anal sex and other infected blood.”

A recent study out of Switzerland found that being HIV positive was independently associated with a 73-fold increased risk of hep C infection among MSM. Meanwhile, the researchers found no elevated transmission rates among HIV-negative MSM.

Even more worrisome is the apparent fact that HIV appears to supercharge hep C’s attack on the liver in this population. Hep C typically requires decades to cause significant liver damage, but when Fierer studied 11 HIV-positive MSM who acquired hep C sexually, he found that nine of these men developed stage two liver fibrosis and another one developed stage one fibrosis within a median 14 weeks after the first detection of their infection. (There are four fibrosis stages.) In another of Fierer’s studies, out of 15 MSM with hep C and HIV whom he was unable to cure through treatment, four developed decompensated cirrhosis, or liver failure, a mere 17 months to six years after their hep C infection. Out of these four, three died of liver failure within eight years of testing positive for hep C. The one who did survive had a liver transplant two years after finding out he had the virus.

As with the emergence of any new disease or route of transmission, a confluence of contributing factors, both biological and social, may be at play. In the late 1990s the modern era of antiretrovirals allowed HIV-positive men to live longer and return to robust health, which included a generally more active sex life. And since that time, with fewer men dying and with rates of new HIV infections only increasing among MSM, the total number of gay men living with HIV has risen. Serosorting also emerged as a phenomenon, with HIV-positive men frequently opting for sex without condoms when having sex with HIV-positive partners. Also, with the popularity of crystal meth and other party drugs, a new kind of drug-fueled sexual party scene has woven its way into the fabric of gay culture.

Different studies have parsed apart a series of variables that are independently associated with a raised risk of sexual transmission of hep C among HIV-positive MSM—meaning that engaging in any one of them may pose a risk. These include insertive or receptive intercourse without a condom, insertive or receptive fisting, group sex, being high on crystal meth, rectal pain and bleeding and the use of nasal drugs. Fierer stresses that while research does suggest that “aggressive sex” raises the risk of hep C transmission, “you don’t have to do aggressive things to

get HCV—just simply bottom without condom. That is an important message so people don't think that if they just avoid orgies and fisting parties then they are okay."

Fierer also worries about scenarios in which one top, or insertive partner, has intercourse with two or more consecutive bottoms, perhaps transmitting hep C from one bottom to the next by transferring infected cells that coat his penis.

According to Bradley Hare, one theory of why people with HIV may be more susceptible to sexual transmission of hep C through anal sex is because of the harm HIV causes to the lining of the gut. Hep C-infected semen or blood entering the rectum, which is a part of the gut, may therefore possibly establish an infection more readily.

While the threat of accelerated hep C disease progression is indeed highly troubling, Fierer says there is good reason for optimism if the virus is detected early enough. For the most part, the rapid onset of fibrosis should then be reversible following successful treatment. And by the end of the year, new drugs will likely hit the market that will make hep C curable in eight to 12 weeks in perhaps 93 to 100 percent of most cases. Furthermore, cure rates will likely be comparable regardless of HIV status.

This says nothing, of course, of the rather shocking expense of these drugs—currently, the tab for hep C treatment runs $84,000 and up. Lynn Taylor, for one, worries that hep C drugs may soon be rationed so that only those with the most severe liver damage will receive treatment, leaving those with more recent infections out in the cold, regardless of how different the progression of their disease state may be compared with others living with hep C. Not to mention the fact that these men may then transmit the virus to others sexually.

Successful treatment depends on detection, however. Detecting HIV in the first place is obviously a significant step. Outside of that, Taylor is on a mission to change the hep C testing protocol among the HIV population and is furiously conducting research in hopes of supporting such an aim. Current testing guidelines are crafted under the assumption that new hep C cases are largely a result of injection drug use, as has historically been the case. Because contaminated needles and other drug-injecting equipment transmit hep C much more readily than they transmit HIV, typically someone who tests positive for HIV would have contracted hep C first. Therefore, only a one-time hep C test is recommended for those with HIV upon entry into care, or if someone reports other risk factors. This leaves out in the cold those who acquire hep C after HIV and who may be unaware of their risk and whose clinicians may be similarly in the dark.

"I can't believe, 33 years into the HIV epidemic, we haven't learned our lesson that risk-based testing is not enough," Taylor says. "There are a million reasons why we don't walk into a medical setting and disclose all our drug-related and sexual behaviors."

A relatively good way to monitor for acute hep C infections is to conduct quarterly ALT screens—detecting for abnormalities in liver enzymes that may indicate a hep C infection. Because the ALT level becomes elevated about two weeks before the body produces antibodies to hep C,

this is arguably a more sensitive test than an actual hep C antibody test.

But a push to institute such methodical screening is flying in the face of the recent movement to reduce the number of CD4 tests people with HIV undergo. New guidelines state that if someone with HIV has high CD4s there is no more need to test quarterly. However, as Fierer points out, these guidelines do not suggest that people with HIV shouldn't keep coming in for a check-up every three months.

"It's a disaster waiting to happen to decrease the screening frequency" for other potential problems, Fierer says. "[Clinicians] need to see people for other reasons."

Fierer is deeply concerned about what the future may bring for hep C's spread within the HIV-positive MSM community.

"It could be prevented now," he says of a potentially more widespread epidemic. "Don't wait until it's a huge problem. Then the horse is out of the barn. When is the last time that something that's transmitted by sex just dissipated? I just don't see that happening."

Indeed, if hep C manages to take a widespread hold, curing HIV-positive men of hep C may only prove a stopgap solution in many cases. In a recent study of HIV-positive MSM in Amsterdam who contracted hep C sexually, a third of those who underwent successful hep C treatment were reinfected with the virus within two years.

Note: Fierer is looking for HIV-positive MSM with recent hepatitis C infection. He would like to assist in the evaluation and treatment of their condition as well as to engage them in his research in order to help solve this expanding epidemic. If you have an abnormal LFT screen (ALT's are under the umbrella of the LFT's) or already know your new hepatitis C diagnosis, please contact him as soon as possible at daniel.fierer@mssm.edu

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