Dangerous liaisons: risky sex, drugs and hep C

Over the past several years, reports from Australia, Western Europe and the United States suggest that outbreaks of HCV infection are occurring among HIV positive bisexual and gay men who do not inject drugs. These findings raise the possibility of HCV being a sexually transmitted infection. To find out exactly why some men who have sex with men (MSM) are susceptible to HCV, researchers in the UK conducted a study with extensive interviews and molecular analysis of HCV. Here are their findings in context.

Historically speaking

Based on research in HIV negative heterosexual couples in monogamous relationships where one partner was HCV positive, sexual transmission of HCV was considered uncommon. The American National Institutes of Health (NIH) has not recommended the use of condoms to prevent HCV transmission in such monogamous couples. Indeed, sexual transmission of HCV in these couples is considered a low risk.

Then things began to change

In the past 10 years, reports of HCV infections in some MSM have emerged. What was unusual about these reports is that the men apparently were not injection drug users. So some researchers concluded that sexual transmission of HCV among these men was a possibility.

The big question

Faced with this, some researchers began to ask themselves and their colleagues this question:

Why are these outbreaks of HCV occurring among MSM who are HIV positive but apparently not among HIV negative men who engage in the same sexual practices?

So far, outbreaks of HCV in HIV negative men who do not inject street drugs have not been detected. One possibility is that these HIV negative men engage in less frequent risky behaviours or have fewer encounters with the healthcare system. But another possibility is that having HIV infection makes some people more susceptible to HCV infection.

Support for this idea has arisen because studies have found the following:

- The immune system in the intestinal tract of HIV positive people is particularly weak.
- This could result in weakened local immunity in the anus and rectum. It may also explain why HIV positive people are susceptible to HCV infection regardless of their CD4+ count.
- Another factor could be that high levels of HCV have been found in the semen of HIV/HCV co-infected men. If these men then have unprotected intercourse, their risk for transmitting HCV would be relatively high.
- Sexually transmitted infections (STIs) are common in some MSM. Indeed, for the past several years, outbreaks of syphilis and gonorrhea have been reported among HIV positive MSM in several high-income countries, including Canada. Many STIs can cause sores or lesions and could weaken local immunity in the genitals. These factors increase the risk that STIs can help facilitate the transmission of HCV.

Sex and risk

As part of a study tracing the origins of a recent outbreak of HCV in HIV positive men, researchers in the UK asked the men to complete detailed questionnaires. The researchers asked extensive questions about the men’s sex lives and substance-using behaviour. A total of 60 men (54% of the group) returned completed questionnaires. For comparison, researchers collected and analysed health-related information from 130 HIV positive men who did not
have HCV infection.

In assessing the behaviours of the two groups, researchers found that men who became infected with HCV were more likely to have engaged in the following behaviours:

- unprotected anal sex (active or passive) with or without ejaculation
- unprotected group sex
- fisting
- rimming
- use of sex toys
- substance use

**More about street drugs**

Men with HCV were more likely to have sex while under the influence of street drugs, particularly the following:

- crystal meth
- ketamine (special K)
- GHB (gamma hydroxybutyrate)
- poppers
- ecstasy
- LSD

**Context is everything**

It is likely that when using street drugs the men’s judgment, critical thinking and sense of safety were distorted. This would then place them at risk for HCV infection.

It is also possible that the men may have thought they had little to fear from other STIs because they already had HIV, and so they felt free to engage in unprotected sex with other HIV positive men. They may not have known that HCV may be sexually transmitted.

Some of the street drugs previously listed can weaken the immune system and dry mucous membranes in the anus, increasing the risk for getting STIs and developing cuts or abrasions.

Having unprotected sex with multiple partners increases the chance of exposure to more germs, including HCV.

**The need for education**

Educational programs for HIV positive people now need to note the following:

- HIV makes the body susceptible to many infections.
- One of those infections is HCV.
- Unprotected intercourse also places HIV positive people at risk for many STIs. The greater the number of unprotected sexual encounters, the greater the risk of exposure to STIs. These germs can create sores or lesions that increase the risk of getting and passing on HCV, HIV and other STIs.
- In people who are already HIV positive, subsequent infection with HCV can result in accelerated liver damage, leading to painful complications and, in some cases, liver cancer and death. Indeed, doctors have reported that some people with HIV have died in as little as three years after subsequently becoming infected with HCV.
- While there are treatments for HCV infection, they are, at best, unpleasant. Moreover, HCV genotype 1, the most common genotype found in North America, responds poorly to therapy in co-infected people. Indeed, it appears that only about 30% of HIV/HCV co-infected people with genotype 1 recover from HCV infection.

Overall, these should be very compelling reasons to engage in safer sex, regardless of HIV or HCV status.

While our report has focused on research in HIV positive men, it is likely that unprotected intercourse also poses a risk of HCV transmission to HIV positive women.

**REFERENCES:**


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