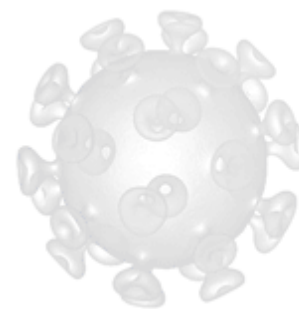


CROI 2014

21st Conference on Retroviruses and Opportunistic Infections

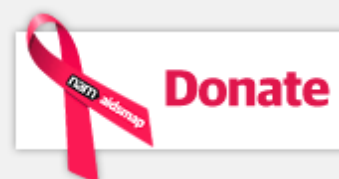
Boston, USA, 3-6 March 2014



Wednesday 5 March 2014

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HIV treatment is prevention for gay men and heterosexuals



Press conference at CROI 2014. Photo by Liz Highleyman, hivandhepatitis.com.

What are the chances of someone with an undetectable viral load passing HIV on to a sexual partner? "Our best estimate is it's zero" said investigators presenting research from the first two years of the PARTNER study, involving couples in which one partner has HIV and the other does not.

[Final results from the study are due in 2017 but, so far, there have been no transmissions when the HIV-positive partner in a couple has an undetectable viral load.](#)

[The ongoing PARTNER study](#) has so far recruited 1110 couples where the partners have differing HIV status – and nearly 40% of them are gay couples.

The findings build on the results of the [HTPN 052 study](#), which showed a 96% reduction in [transmission when the HIV-positive partner in a couple starts treatment early](#). This study involved mostly heterosexual couples.

During follow-up in the PARTNER study, all the heterosexual HIV-negative partners reported having vaginal sex without condoms, 72% with ejaculation; 70% of the gay HIV-negative partners reported having receptive anal sex without condoms, 40% with ejaculation, while 30% reported only being the insertive partner. A significant proportion of the heterosexual couples reported anal sex.

The investigators estimated that the gay couples had sex on 16,400 occasions and the heterosexual couples on 14,000 occasions.

There were no cases of HIV transmission when **viral load** was below 200 copies/ml.

Statistical analysis showed that an undetectable viral load reduced the risk of transmission during vaginal sex by 99.5% and during anal sex by 99% (96% with ejaculation).

However, the researchers believe the true efficacy of treatment as prevention is likely to be nearer 100%, although, as the study's principal investigator pointed out, it will probably never be possible to show with mathematical certainty that the risk of transmission from someone on successful HIV therapy is absolutely zero.

Related links

[Read this news report in full on aidsmap.com](#)

[A webcast of this session is available through the CROI website](#)

[Find out more about the PARTNER study](#)

[Read NAM's factsheet on HIV treatment and sexual transmission](#)

Hepatitis C treatment for people with HIV and HCV co-infection



Prof. Douglas Dieterich of Mount Sinai School of Medicine discusses recent advances in treatment of hepatitis C and HIV co-infection at CROI 2014. Photo by Liz Highleyman / hivandhepatitis.com

Treatment for hepatitis C virus (HCV) based on the next-generation protease inhibitor simeprevir (*Olysio*) achieved a 79% cure rate in people with HIV co-infection who were taking HCV therapy for the first time.

Simeprevir was combined with pegylated interferon and ribavirin. The study involved 106 participants, all with genotype 1 HCV. None of the participants had liver cirrhosis and 53 were taking **HCV therapy** for the first time.

The primary endpoint of the study was a sustained virological response (SVR) twelve weeks after completing treatment (SVR12). Overall, 74% of participants in the study had this outcome, including 79% of people taking therapy for the first time and over 50% of those with a previous null response to dual therapy.

Infection with genotype 1b HCV and less advanced fibrosis stage were also predictors of a successful outcome.

The most frequent side-effects were headache, rash and nausea.

Separate research showed that hepatitis treatment with the protease inhibitor faldaprevir in combination with pegylated interferon and ribavirin had a 75% cure rate in people with HIV and HCV co-infection.

The research involved 308 people with HIV co-infection, all with HCV genotype 1. At baseline, 95% had an undetectable HIV viral load and average **CD4 count** was 540 cells/mm³.

The dose of faldaprevir was adjusted according to whether participants were taking HIV therapy based on a **protease inhibitor**, **efavirenz** (*Sustiva*) or **raltegravir** (*Isentress*).

The primary endpoint was SVR12. Overall, 71-72% of participants achieved this outcome. As with other HCV therapies, **IL28B** status was associated with the success of treatment (88 vs 64% CC vs non-CC, respectively).

The most common side-effects were nausea, tiredness, diarrhoea, headache and weakness. Elevations in bilirubin were also observed in a fifth of participants.



Susanna Naggie from Duke Clinical Research Institute presenting at CROI 2014. Photo by Liz Highleyman, hivandhepatitis.com.

An interferon-free regimen of sofosbuvir (*Sovaldi*) plus ribavirin for 24 weeks led to sustained response (cure) in 75% of people with HIV and hepatitis C co-infection with HCV genotype 1 who had not previously taken treatment. A shorter, 12-week regimen did not work as well for people with genotype 3.

The PHOTON-1 study enrolled 114 people with HCV genotype 1 who had not previously taken hepatitis C treatment (treatment naive). They received 400mg once-daily sofosbuvir, plus 1000-1200mg weight-based ribavirin for 24 weeks. In addition, the study included 68 treatment-naive and 41 treatment-experienced people with genotypes 2 or 3. Treatment-naive participants received sofosbuvir and ribavirin for 12 weeks, while non-responders were treated for 24 weeks.

Among treatment-naive genotype 1 patients, 76% achieved SVR12. One person had detectable HCV again after completing treatment, giving an SVR24 rate of 75%, but this may have been a case of re-infection rather than relapse. Among treatment-naive genotype 2 patients treated for 12 weeks, SVR12 and SVR24 rates were both 88%. Among genotype 3 patients, however, rates fell to 67%.

Related links

[Read the simeprevir news report in full on \[aidsmap.com\]\(http://aidsmap.com\)](#)

[A webcast of this session is available through the CROI website](#)

[Read the faldaprevir news report in full on \[aidsmap.com\]\(http://aidsmap.com\)](#)

[A webcast of this session is available through the CROI website](#)

[Read the sofosbuvir news report in full on \[aidsmap.com\]\(http://aidsmap.com\)](#)

[↗ A webcast of this session is available through the CROI website](#)

Treatment for HCV mono-infection



Prof. Rajendar Reddy, of the University of Pennsylvania Hospital, presenting at CROI 2014. Photo by Liz Highleyman, hivandhepatitis.com.

Twelve weeks of hepatitis treatment with a combination of three direct-acting antivirals (DAAs) cured 99% of people who had not taken treatment before.

The combination consisted of the HCV protease inhibitor ABT-450 boosted with ritonavir co-formulated with the HCV NS5A inhibitor ABT-267, plus the HCV non-nucleoside polymerase inhibitor ABT-333.

Just over 400 people with genotype 1b HCV were recruited to the study. Half took triple therapy plus **ribavirin**, the others triple therapy plus a ribavirin placebo.

The cure rate was 99-99.5%. Only one patient had a virological rebound during treatment and two relapsed after the completion of therapy.

Headache and nausea with the main side-effects.



Anita Kohli, presenting at CROI 2014. Photo by Liz Highleyman, hivandhepatitis.com.

Separate research showed all-oral therapy with three drugs can cure harder-to-treat HCV.

Participants took sofosbuvir, ledipasvir and a third direct-acting drug for as little as six weeks.

The study, called SYNERGY, enrolled 60 mostly low-income people with chronic hepatitis C in Washington, DC. Most had factors traditionally associated with poor treatment response: about 70% were men, around 90% were African-American, about 85% had unfavourable non-CC IL28B gene variants and 70% had hard-to-treat HCV subtype 1a. About one-quarter had advanced liver fibrosis or cirrhosis, but people with cirrhosis were excluded from the six-week arms.

"We believe this population is really reflective of the hepatitis C population in the US, which historically has been a difficult-to-treat population," said the presenter.

Participants were randomly assigned to receive either dual therapy with sofosbuvir/ledipasvir alone for 12 weeks, or the co-formulation plus a third direct-acting drug – either the non-nucleoside HCV polymerase inhibitor GS-9669 or the HCV protease inhibitor GS-9451 – for six weeks.

HCV viral load declined rapidly after starting therapy and 100% of participants had undetectable levels at the end of treatment. A single person in the GS-9669 arm relapsed after stopping therapy, resulting in SVR12 rates of 100% with 12-week dual therapy, 95% with GS-9669 triple therapy and 100% with GS-9451 triple therapy.

All regimens were generally safe and well tolerated. There were no serious adverse events or study discontinuations related to study drugs. The most common side-effects were headache, fatigue and diarrhoea, the latter occurring more often in the GS-9669 arm.

Related links

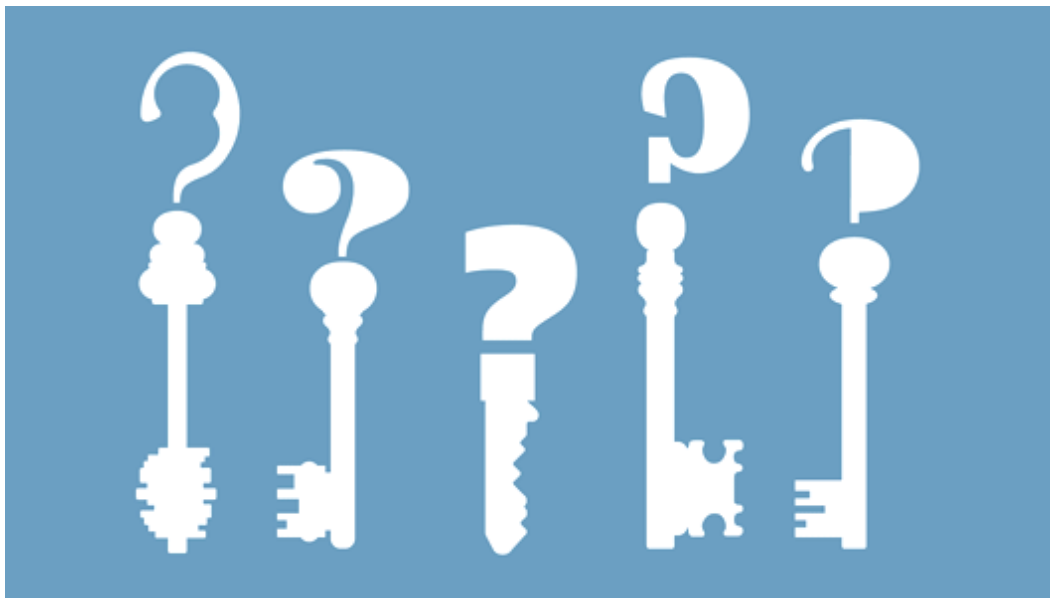
[Read "AbbVie '3D' combination cures 99% of genotype 1b hepatitis C" on aidsmap.com](#)

[A webcast of this session is available through the CROI website.](#)

[Read "Six-week oral treatment can cure hard-to-treat hepatitis C patients" on aidsmap.com](#)

[A webcast of this session is available through the CROI website](#)

Community workshop on cure research asks 'where does HIV hide?'



Delegates at a **community cure workshop** held in advance of the conference might have been in a less hopeful frame of mind than they had been seven months previously when, at the International AIDS Society conference, it looked as if **two more people** had joined **Timothy Ray Brown** in being cured of HIV, using a similar bone-marrow transplant technology.

Hopes were dashed when, in December, it was announced that both the so-called 'Boston patients' had experienced a return of their HIV after staying virally undetectable off treatment for several months. Detailed results will be presented at the conference, but the challenge will be to find out where their HIV reappeared from, why it took so long, and how we could eliminate or control the tiny 'reservoir' of HIV that remains in such patients.

Related links

[Read this news report in full on aidsmap.com](#)

HIV treatment as prevention – launch of community consensus statement

NAM and **EATG**, Europe's community group for people with HIV, recently launched a consensus statement, for endorsement by the HIV community, on using HIV treatment to prevent the transmission of HIV.

Read, sign and share the statement at: www.hivt4p.org

Related links

[Visit www.hivt4p.org](http://www.hivt4p.org)

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