



Preventing transmission

In 2008, Swiss researchers suggested that people taking ARVs whose plasma viral load (viral load apparent on a blood test) had been undetectable for at least six months may not be at risk for transmitting HIV. The Swiss went so far as to suggest that these people didn't have to use condoms or practise safer sex in certain circumstances (if their adherence to treatment was good, they had no fever and no other sexually transmitted infections).

At the CROI conference this year, several studies came to somewhat different conclusions, finding that more than 5% of men who had an undetectable plasma viral load could still have a detectable viral load in their semen. This would suggest that even though ARVs significantly reduce the risk of transmission, a blood test showing undetectable viral load doesn't necessarily reduce the risk of transmission to zero. It's therefore recommended that people continue to take adequate precautions.



New treatments

Little research on new antiretroviral treatments was presented. However, two early-stage (Phase I) studies were presented on new "boosting" medications. Currently, protease inhibitors (PIs) are generally prescribed along with small doses of another PI, ritonavir. These small ritonavir doses aren't active against HIV themselves, but work to boost the levels of the other drugs. These new investigational medications could potentially play a role similar to ritonavir.

The first study looked at a medication called GS-9350, co-formulated in a new "quadruple" pill containing four medications: GS-9350, emtricitabine (Emtriva[®]), tenofovir (Viread[®]) and elvitegravir (a new integrase inhibitor). GS-9350 was shown to increase the concentration of elvitegravir in the blood to 11 times its initial level. The treatment was well tolerated in HIV negative volunteers and had no negative effect on lipid (fat) metabolism. This "quadruple pill" will now be put into a larger Phase II study, which will compare it to Atripla[®] (tenofovir, emtricitabine and efavirenz). If it performs well, it may become another viable single-pill, multi-drug treatment option.

The second study looked at the tolerability of a new compound called SPI-452 and its ability to boost different PIs. Different doses of the medication (25, 50, 100, 200, 400 and 600 mg) were compared to placebo (a sugar pill). The new treatment was found to be safe and well tolerated, and it significantly increased the blood levels of saquinavir (Invirase[®]), atazanavir (Reyataz[®]) and darunavir (Prezista[®]). Researchers concluded that this new PI booster was very promising, and will continue to develop it.

Update on metabolic effects

There were a great number of oral and poster presentations, reflecting the impressive amount of research going on around the world. While there were no major breakthroughs in terms of new treatments for HIV, we found out more about the controversy surrounding metabolic problems and antiretrovirals (ARVs). See Dr. Marek Smieja's article on page 7 of this issue for an update on this question. **R**

This report looks at only a small sample of the presentations at the XVIth annual CROI conference. You can find a complete list of abstracts on the conference web site: www.retroconference.org/2009.

