CROI 2007: Conference Notes

March 14, 2007

The biggest HIV science conference of the year produced the usual torrent of data and some promising news. Here are some highlights from the 14th annual Conference on Retroviruses and Opportunistic Infections (CROI), which took place February 25-28 in Los Angeles. For details, check out the links below:

HIV's family tree
Evidence of the virus' origins continues to grow. At CROI, researchers revealed that the type of HIV most common in this country originated in Haiti, where it migrated from equatorial Africa (Cameroon) in 1966 and then moved on again in 1969. These findings may help scientists analyze HIV's genetic structure, develop effective vaccines—and stem future epidemics involving other viruses.

Back to breastfeeding
Experts used to recommend that all positive moms feed their infants formula, because HIV can be transmitted via breast milk. But using formula in areas of the world where clean water isn't always available has been known to cause infant deaths from diarrhea and GI infection. Now new studies suggest that the benefits of breastfeeding—moms deliver natural immune-boosters that can't be found elsewhere—may outweigh the risk of HIV transmission.

New HIV drugs
This is what got the headlines. Several experimental new meds provide brand new ways of interfering with HIV, promising relief to folks with drug-resistant virus. With as many as one in 10 newly diagnosed people resistant to at least one med (not to mention all those long-timers with resistance to many), new drugs can't pop out of the pipeline soon enough:

Two integrase inhibitors—**Isentress** (raltegravir, long watched as MK-0518) and **elvitegravir** (GS-9137)—took center stage. These drugs botch a key stage in HIV's reproductive cycle—the part where HIV's DNA is packed right into the genes of your immune cells—and these two drugs have shown an ability to drop viral loads sharply among those who've been on HIV meds before.

Maraviroc (UK-427, 857), which is moving closer to FDA approval, looks good in late-stage clinical trials. This will be the first entry-inhibitor (EI) delivered in the form of a pill, as opposed to a needle. Drugs in the EI class bar HIV from entering immune cells in the first place.

A new med in an old class, non-nuke (NNRTI) **rilpivirine** (TMC-278) matched Sustiva (efavirenz)

for effectiveness in treatment newbies, but apparently without the vivid dreams and other central nervous system side effects that can bug the other drug. This could become a choice for people just beginning to take HIV meds.

New info on existing drugs

People taking combos that include the protease inhibitor (PI) Kaletra (lopinavir/ritonavir) ended up with less **lipoatrophy** (fat loss) than those taking Sustiva combos; everyone in that study did better with Viread (tenofovir) than they did with Retrovir (AZT) or Zerit (d4T).

People on meds with viral loads above 100,000 may get a longer-term advantage from twice-daily **Kaletra** than from once-daily. The same goes for twice- vs. once-daily combos of **Viramune** (nevirapine).

It turns out that **Baraclude** (entecavir), a drug approved for hepatitis B, suppresses HIV too. Sounds good, but it's not: If folks who have both HIV and hep B take Baraclude by itself (before starting HIV combo therapy), their HIV may develop resistance that could limit future med choices.

And speaking of hepatitis, data were presented confirming sexual transmission of hepatitis C among gay men—both HIV positive and negative. For years it seemed that C got passed along only through needles.

Something else that's not an HIV med but suppresses HIV anyway: The **herpes**-fighting drugs acyclovir (Zovirax) and valacyclovir (Valtrex) push down HIV viral loads, both in genital secretions and in the bloodstream.

Fat chances

Because lipodystrophy (abnormal fat loss and gain) is a common side effect of HIV and its meds, and since so many positive people are reaching the age where blood fat problems are common, lipids hogged the stage at CROI:

Positive people seem to pack more unhealthy fats (unsaturated and trans) into their **daily diets** than negative people, potentially contributing to the high blood-fat levels seen in positive folks.

Drugs to lower total cholesterol, "bad" (LDL) cholesterol and triglyceride levels don't work as well in folks with HIV as in negative people—at least in part because HIV meds interact with some lipid-lowering drugs.

Zetia (ezetimibe), which blocks cholesterol absorption in the gut, is proving safe and useful for people with HIV. But it seems to work best when teamed with a lipid-lowering statin.

A new drug to treat HIV lipodystrophy, **TH9507**, did the job in a Phase III trial, reducing belly fat buildup by 20% over 12 weeks, possibly with very few side effects.

Also at CROI

When **positive people smoke**, it increases the amount of papillomavirus (HPV) in the blood, promoting anal and genital lesions and cancers, according to a study involving 267 HIV-positive gay men.

After years when AIDS was branded by its special **cancers** (Kaposi's sarcoma, lymphoma, cervical cancer), researchers are reporting a sea change: Nowadays, non-AIDS-related cancers such as lung and liver cancer cause more deaths among positive people.

Several studies examined the continuing question: How, when and where does HIV affect **brain function**? And what about the meds? Some encouraging news emerged: An HIV combo made of drugs from four different classes slows progressive multifocal leukoencephalopathy, or PML, for instance, a brain condition in advanced AIDS. But we still lack hard facts about whether HIV meds that penetrate the brain make any difference in how you feel, act or think.

The African-American Angle at CROI

A few days after CROI, the CDC announced news of its own about HIV and AIDS in African-American communities. Between 2001 and 2005, black people accounted for 51% of new HIV and AIDS diagnoses in the U.S. Echoing some CROI reports, the CDC found that more newly diagnosed black people had AIDS than HIV—possibly because they hadn't been tested or received care during the more treatable early stages of life with the virus.

In one CROI survey, 25% of black men began HIV care with CD4 counts below 50, compared to 10% of white women starting treatment at that CD4 level. Starting care late, this study said, chops about 1.5 years from the lives of positive black people and other racial and ethnic minorities compared to white people with HIV.

Several CROI reports looked at how African Americans respond to HIV meds, including one that analyzed how they fared on the nuke Viread in two studies. The results: More positive black people taking Viread kept viral loads undetectable for about two years than did those who took nukes Retrovir and Zerit (d4T). Of those on Viread with Epivir or Emtriva (FTC), 61% stayed undetectable through week 96, compared to 43% of those on Combivir (Epivir plus Retrovir) or Zerit/Epivir. And Viread combos caused significantly smaller blood-fat increases in black people than combos containing the other nukes.

In these studies, fewer black people experienced side effects that caused them to stop taking Viread and none experienced significant kidney damage from any of the combos. Although there were no comparisons with the non-black people in the studies, these results preview a promising future for combo therapy among African Americans.
