Women Might Have More Favorable Blood Levels of Some HIV Drugs

January 14, 2011

A new study, presented at the 1st International Workshop on HIV and Women, held January 10 to 11 in Washington, DC, suggests women might have more desirable blood levels of at least two HIV drugs than men. The study was reported by the National AIDS Treatment Advocacy Project (NATAP).

A number of studies have noted that women occasionally have higher rates of side effects from common antiretroviral drugs than men. Researchers have suggested this is because women are generally smaller than men and have much higher levels of certain hormones that can affect how drugs get processed, resulting in higher blood levels of these drugs.

To explore this possibility, researchers at the University of Toronto monitored blood levels of four commonly used antiretroviral (ARV) drugs in 18 HIV-positive women during the course of three weeks. The weekly tests meant that the researchers would gain a more accurate assessment of the average blood levels of these drugs, as opposed to some studies in which drug levels are tested at only one point in time. The four drugs tested were Viramune (nevirapine), Sustiva (efavirenz), Kaletra (ritonavir plus lopinavir) and Reyataz (atazanavir). Some women were using low-dose Norvir (ritonavir) to boost their blood levels of Reyataz, and others weren't.

Mona Loutfy, MD, one of the study's authors, reported that she and her colleagues found that the average minimum concentrations (Cmin) of at least two drugs—Viramune and Kaletra—were significantly higher than what has been found in previous studies in the general population, while minimum concentrations were lower than average in women taking Reyataz or Sustiva. The primary concern about blood levels is keeping them within a "therapeutic" range, whereby there is enough drug present to shut down HIV repliction almost entirely, but not so much that it increases the risk of side effects. The authors suggest, however, than maintaining a higher than average Cmin level, even within this therapeutic range, might confer a treatment advantage.

Loutfy's team also found, contrary to expectation, that the maximal concentrations (Cmax) of all four drugs was slightly lower than average in their study participants. A lower Cmax would, theoretically, predict fewer and less severe side effects in the women.

The authors caution that because they did not also test blood levels in men, their results can't be interpreted too broadly. They do suggest, however, that the results mean that women might retain

better control of HIV than men for at least some drugs.

© 2026 Smart + Strong All Rights Reserved.
http://beta.docker.poz.com/article/hiv-drug-bloodlevels-19757-2250