

Malnutrition decreases effectiveness of HIV treatment in pregnant African women

February 18 2014

In Uganda the prescription of three antiretroviral (ARV) drugs, which aim to suppress the virus to prevent disease progression, have resulted in huge reductions in HIV mortality rates. However, disease is not the only scourge in Uganda, and a new study in *The Journal of Clinical Pharmacology* explores the impact food insecurity may have on treating pregnant women.

A U.S-Ugandan research team explored the affect pregnancy and malnutrition can have on the administration of lopinavir/ritonavir (LPV/r) and efavirenz (EFV) drugs among HIV-infected women in Tororo, Uganda.

Blood and hair samples from 221 women were analyzed, revealing that 80% of patients were malnourished and 26% lost weight during their pregnancy. Average (median) Body Mass Index was found to be only 20.2 kg/m².

The team found that, compared to well-nourished patients, drug exposure was reduced in these patients (LPV -33%, EFV -15%, ritonavir -17%).

"This study in 221 pregnant and breastfeeding HIV-infected women with severe food insecurity in Uganda showed that food insecurity influences exposure parameters to antiretroviral treatment," said Dr. Imke Bartelink. "Compared to previously published data from well-nourished women, food insecurity is associated with decreases in antiretroviral

exposure ranging from 15% to 41% in this group of pregnant and breastfeeding women, irrespective of pregnancy status."

More information: Imke H. Bartelink, Rada M. Savic, Julia Mwesigwa, Jane Achan, Tamara Clark, Albert Plenty, Edwin Charlebois, Moses Kanya, Sera L. Young, Monica Gandhi, Diane Havlir, Deborah Cohan, Francesca Aweeka, "Pharmacokinetics of lopinavir/ritonavir and efavirenz in food insecure HIV-infected pregnant and breastfeeding women in tororo, Uganda" *The Journal of Clinical Pharmacology*, [DOI: 10.1002/jcph.167](https://doi.org/10.1002/jcph.167)

Provided by Wiley

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