Abstract

Standard-dose HSV-2 suppressive therapy (acyclovir 400 mg twice daily) reduces plasma HIV-1 levels by 0.25-0.50 log(10) copies/mL. It is not known if higher doses might further suppress HIV-1 levels. METHODS: We enrolled 32 HIV-1/HSV-2 dually infected Kenyan individuals who were not on antiretroviral therapy (ART) into a randomized, crossover trial of 2 dosing regimens of HSV-2 suppression: valacyclovir 1.5 g vs acyclovir 400 mg, both twice daily for 12 weeks, then a 2-week washout, and then the alternative for 12 weeks. Weekly plasma HIV-1 RNA quantity was measured (ClinicalTrials.gov number NCT01026454). RESULTS: Mean plasma HIV-1 levels were significantly lower on valacyclovir compared with acyclovir: 2.94 vs 3.56 log(10) copies/mL, an average difference of 0.62 log(10) copies/mL (95% confidence interval [CI]: -0.68, -0.55; $P < .001$), a 76% decrease. Valacyclovir resulted in a 1.23 log(10) copies/mL decrease compared with baseline HIV-1 levels without HSV-2 suppression. Adherence was similar (99.4% of dispensed study tablets taken), and high-dose valacyclovir was well tolerated. CONCLUSIONS: High-dose valacyclovir reduced plasma HIV-1 viral levels by 0.62 log(10) copies/mL compared with standard-dose acyclovir. The potential for higher-dose HSV-2 suppressive therapy to slow HIV-1 disease progression and reduce HIV-1 infectiousness among HIV-1/HSV-2 coinfected persons not yet eligible for ART warrants further evaluation.