

Lipid Changes in Kenyan HIV-1-Infected Infants Initiating Highly Active Antiretroviral Therapy by One Year of Age.

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Abstract:

BACKGROUND: Early highly active antiretroviral therapy (HAART) is recommended for HIV-1 infected infants. There are limited data on lipid changes during infant HAART. **METHODS:** Non-fasting total (TC), low density lipoprotein (LDL), and high density lipoprotein (HDL) cholesterol, and triglycerides (TG) were measured at 0, 6 and 12 months. Correlates of lipid levels and changes post-HAART were assessed using linear regression. **RESULTS:** Among 115 infants, pre-HAART median age was 3.8 months, CD4% was 19%, and weight-for-age z-score (WAZ) was -2.42. Pre-HAART median lipid levels were: TC, 108.7 mg/dl, LDL, 42.5 mg/dl, HDL, 29.4 mg/dl and TG, 186.9 mg/dl. Few infants had abnormally high TC (6.2%) or LDL (5.6%), but many had low HDL (76.5%) or high TG (69.6%). Higher pre-HAART WAZ and HAZ were each associated with higher pre-HAART TC ($P=0.04$ and $P=0.01$) and LDL ($P=0.02$ and $P=0.008$). From 0-6 months post-HAART, TC ($P<0.0001$), LDL ($P<0.0001$), and HDL ($P<0.0001$) increased significantly, and 23.1% ($P=0.002$), 14.0% ($P=0.2$), 31.3% ($P<0.0001$), and 50.8% ($P=0.2$) of infants had abnormally high TC, high LDL, low HDL, and high TG, respectively. Changes in TC and HDL were each associated with higher gain in WAZ ($P=0.03$ and $P=0.01$) and HAZ ($P=0.01$ and $P=0.007$). Increased change in LDL was associated with higher gain in HAZ ($P=0.03$). Infants on protease inhibitor (PI)-HAART had smaller HDL increase ($P=0.004$). **CONCLUSIONS:** Infants had substantive increases in lipids, which correlated with growth. Increases in HDL were attenuated by PI-HAART. It is important to determine clinical implications of these changes.