ABSTRACT

Background: There is limited information on perinatal outcomes in HIV-hepatitis B virus (HBV) coinfection. **Methods:** HIV Prevention Trials Network (HPTN) 046 was a randomized double-blind placebo-controlled trial of perinatal transmission that evaluated 6 months of infant nevirapine versus placebo among breast-fed infants. Women living with HIV and their infants enrolled in sub-Saharan Africa from 2007 to 2010; 78% received antiretroviral therapy (ART). Maternal samples were tested for hepatitis B surface antigen (HBsAg). High and low HBV viral load (VL) was defined as ≥106 IU/mL and <106 IU/mL. The association between HIV-HBV coinfection and maternal and infant outcomes was assessed using multivariate (MV) logistic and Cox regression. **Results:** Among 2025 women, 88 (4.3%) had HBV. HIV-HBV women with high HBV VL had lower median CD4, versus HIV alone or HIV-HBV women with low HBV VL [320, 490 and 434 cells/mm3, respectively ($P < 0.007$)]. In MV analysis, adjusted for maternal CD4, age and maternal ART, infants born to women with high HBV VL were more likely to be low birth weight (LBW), versus HIV+/HBV– and low HBV VL women: [30% (3/10) vs. 10% (194/1953) vs. 6% (5/78), respectively, $P = 0.03$). High HBV VL was associated with HIV perinatal transmission [(hazard ratio 6.75 (95% confidence interval (CI): 1.86 – 24.50)]. There was no impact on infant mortality or maternal outcomes at 18 months. **Conclusions:** In HIV-HBV women, high HBV viral loads increase the risk of LBW and potentially HIV perinatal transmission. Reduction of antepartum HBV viremia may have beneficial effects beyond the prevention of HBV perinatal transmission.