HIGH HEPATITIS B VIRUS INCIDENCE AMONG HIV-1-INFECTED TREATMENT-NAIVE ADULTS IN BOTSWANA

Background Hepatitis B virus (HBV) is one of the leading causes of death worldwide despite a moderately potent vaccine. HBV prevalence has been shown to be higher in patients infected with the human immunodeficiency virus (HIV), hence increased liver-related morbidity and mortality, as well as general poor health outcomes in HIV-HBV co-infection. We estimated the HBV incidence among HIV-1-infected treatment-naive adults in a longitudinal cohort in Botswana.

Methods Plasma samples from 200 HIV-1C-infected treatment-naïve participants from a completed longitudinal cohort from 2004 to 2007 were screened for HBV surface antigen (HBsAg). HBsAg was assessed using Murex version 3 enzyme-linked immunosorbent assay as per manufacturer’s instructions at 4 timepoints, 12 months apart. We estimated HBV incidence with 95% confidence interval (CI). Cox proportional regression method was used to estimate hazard ratios [gender, age (≤35 or >35) years, CD4+ T cell count (≤450 or >450) cells/µL and HIV viral load suppression (≤400 or >400) copies/mL].

Results The median age of screened individuals was 32 years [Q1, Q3: 28, 40] and 83.5% [167/200] were female. Baseline median CD4+ T cell count was 466.35 cells/µL [Q1, Q3: 380.43, 605.75] and median HIV viral load was 13 450 copies/mL [Q1, Q3: 2365, 37 400]. The HBV incidence was 3.6/100 person-years [95% CI: 2.2–5.6]. There were no significant differences by gender, age, HIV viral load suppression and CD4+ T cell count.

Conclusion We report for the first time a high HBV incidence among HIV-infected adults in Botswana. HBV incidence was high in this population despite generally high CD4+ T cell counts and lower HIV viral loads. Early screening of HBV in HIV-infected individuals is vital and should be included in the national HIV treatment guidelines.