PA-075 RELATIONSHIP OF HIV-HBV CO-INFECTION WITH CD4 CELL COUNT AND ALANINE TRANSAMINASE LEVELS IN ANTI-RETROVIRAL THERAPY-NAïVE PATIENTS

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Background In sub-Saharan Africa, the prevalence of hepatitis B virus (HBV) is between 6–20%. In Zambia, prevalence of HIV and HBV co-infection has been reported to be between 7.1% and 31.1%. Patients infected with HBV are at increased risk of experiencing elevated alanine transaminase enzyme (ALT) and HIV-HBV co-infection may lead to further reduced CD4 cell count before initiating antiretroviral therapy (ART). We investigated the relation of HBV with CD4 cell count and ALT enzyme in HIV-positive antiretroviral therapy-naïve patients.

Methods This was a cross-sectional study conducted in 15 government clinics in Lusaka. There were 5436 adult patients who initiated antiretroviral therapy between 2011 and 2013. Cases were described as HIV-positive patients who tested HBsAg-positive and controls as HIV-positive patients who tested HBsAg-negative. HIV-HBV co-infection was defined as the number of patients who tested HBsAg-positive divided by the total tested (with 95% CI). Laboratory measures of CD4 and ALT were categorised in the analysis. Elevated ALT was defined as ALT≥66 IU/ml. CD4 cell count was dichotomised CD4 of >200 cells/μl.

Results The median age was 35 (29–41) years. The median CD4 cell count was 202 (102–305) cells/μl with the median ALT being 20 (14–30) IU/ml. HIV–HBV prevalence was 12.3% (95% CI: 11.4–13.1). Elevated ALT was reported in 11.1% cases and 4.7% in controls (p-value <0.001). The adjusted odds ratio (OR) of experiencing elevated ALT before ART initiation for HI-HBV patients was 2.4 (95% CI: 1.8–3.2) compared to their HIV-mono-infected counterparts. Of the cases, 53.5% had a CD4<200 while only 48.9% of controls had CD4 <200 before ART initiation (p-value 0.026).

Conclusions Prevalence of HBV is high among HIV-infected persons in Zambia. There is need to explore the interactions of these co-infections and their impact on CD4 cell count and ALT.