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HEPATITIS B VIRUS CO-INFECTION IS ASSOCIATED WITH INCREASED ALL-CAUSE MORTALITY AMONG HIV-INFECTED ADULTS ON TENOFOVIR-DISOPROXIL-FUMARATE CONTAINING ANTIRETROVIRAL THERAPY IN LUSAKA, ZAMBIA

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Methods We prospectively enrolled HIV-infected treatment naïve adults in Lusaka, Zambia. At enrolment, we recorded patient's demographics, body mass index (BMI), WHO clinical stage, CD4+ count, and hepatitis B surface antigen (HBsAg) status. In HBsAg-positive patients we measured HBV viral loads (VL; Roche, COBAS® AmpliPrep/COBAS® Taqman® Assay, Pleasanton, California). We defined active HBV co-infection as having an HBV VL ≥ 20 IU/ml. TDF-based ART was the preferred first-line regimen. Follow-up visits occurred per national guidelines and we used phone and community tracing to optimise retention. Deaths were ascertained by clinic, family member, or community health worker report and losses to follow-up (LFTU) were defined as absences from clinic for 6+ months. Using multivariable Cox regression, we assessed the mortality risk among patients with HBV co-infection, adjusting for age, sex, WHO stage, BMI, and CD4+ count.

Results During 2013–2014, 822 patients were enrolled and analysed at 1 year after ART initiation. Among this group, 438 (53.1%) were women, median age was 34 years (interquartile range, 29–40), 367 (44.8%) had WHO stage 3 or 4, 229 (28.2%) had BMI <18.5, and median baseline CD4+ 224 cells/mm³. Of 126 HBsAg-positive individuals, 81 had active HBV infection. During the first year on ART, 48 patients died, 19 transferred out or withdrew, and 52 were LTFU. Those with HBV co-infection had twice the risk of death (adjusted hazard ratio, 2.23, 95% CI: 1.07–4.65) after adjustment for covariates.

Conclusions In Southern Africa, HBV co-infection is a mortality risk factor and these patients should be diagnosed and those with replicating virus may need closer monitoring. Further investigation of the causes of death in HIV-HBV patients is needed.