Liver fibrosis in treatment-naïve HIV-infected and HIV/HBV co-infected patients: Zambia and Switzerland compared


OBJECTIVE
To examine the association between hepatitis B virus (HBV) infection and liver fibrosis in HIV-infected patients in Zambia and Switzerland.

METHODS
HIV-infected adults starting antiretroviral therapy in two clinics in Zambia and Switzerland were included. Liver fibrosis was evaluated using the aspartate aminotransferase-to-platelet-ratio index (APRI), with a ratio >1.5 defining significant fibrosis and a ratio >2.0 indicating cirrhosis. The association between hepatitis B surface antigen (HBsAg) positivity, HBV replication, and liver fibrosis was examined using logistic regression.

RESULTS
In Zambia, 96 (13.0%) of 739 patients were HBsAg-positive compared to 93 (4.5%) of 2058 in Switzerland. HBsAg-positive patients were more likely to have significant liver fibrosis than HBsAg-negative ones: the adjusted odds ratio (aOR) was 3.25 (95% confidence interval (CI) 1.44-7.33) in Zambia and 2.50 (95% CI 1.19-5.25) in Switzerland. Patients with a high HBV viral load (≥20000 IU/ml) were more likely to have significant liver fibrosis compared to HBsAg-negative patients or patients with an undetectable viral load: aOR 3.85 (95% CI 1.29-11.44) in Zambia and 4.20 (95% CI 1.64-10.76) in Switzerland. In both settings, male sex was a strong risk factor for significant liver fibrosis.

CONCLUSIONS
Despite the differences in HBV natural history between Sub-Saharan Africa and Europe, the degree of liver fibrosis and the association with important risk factors were similar.