Changes in Viral Hepatitis Screening Practices over Time in African HIV Clinics

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Abstract 565

Background

- Approximately 10% of HIV infected individuals are coinfected with hepatitis B virus (HBV) in sub-Saharan Africa (SSA).
- HIV/HBV-coinfected patients are at higher risk of impaired immunological recovery and hepatotoxicity during antiretroviral therapy (ART) compared to HBV-uninfected ones.
- Knowledge of HBV status is important to guide optimal selection of ART drug regimens and monitor liver-related complications during ART.
- We aimed to describe changes in testing practices related to viral hepatitis over a 3-year period in HIV clinics in SSA.

Objectives

The overall aim of the study was to describe the screening and management of viral hepatitis in patients initiating ART at urban HIV clinics within the IeDEA collaboration throughout SSA. Our specific objectives were to:

- Evaluate temporal trends in uptake of HBV and hepatitis C virus (HCV) screening.
- Describe the reasons for HBV and HCV testing and the type of tests used.
- Assess ART prescription patterns in HIV/HBV-coinfected individuals.
- Analyze individual predictors for HBV testing

Methods

Figure 1: Geographical distribution of participating sites



Study procedures and analyses

- Demographic, clinical and laboratory information were collected using a standardized questionnaire with a special focus on screening and management of HBV and hepatitis C virus (HCV) infections.
- Individual treatment histories were analyzed and the proportion of patients receiving a tenofovir (TDF)-containing ART regimen was assessed.
- We examined changes in the proportion of patients screened over time and identified predictors of testing using logistic regression.

Methods

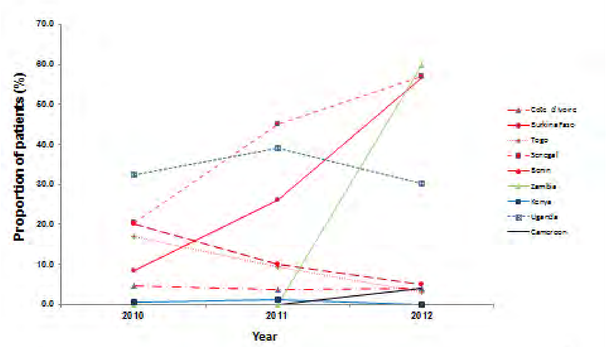
Study population

- The international epidemiologic databases to evaluate AIDS (IeDEA) is an international network of HIV cohorts set up to address clinical and health services research questions.
- A medical chart review was conducted in 11 large urban HIV treatment centers in Côte d'Ivoire (3 sites), Burkina Faso, Bénin, Togo, Sénégal, Zambia, Kenya and Uganda (1 site each) (Figure 1).
- Of the patients who started ART between 2010 and 2012, 100 per year were randomly selected from each clinic.

Results

- 2,981 patients were included (median age 37 years, 64.2% female, Table).
- In total, 471 (15.8%) patients had been tested for HBV infection. This proportion increased slightly over the years (10.4% in 2010, 14.6% in 2011 and 22.9% in 2012, p<0.001) although there were large differences in uptake across countries (Figure 2).
- Overall, 73 (15.5%, 95% confidence interval [CI]: 12.3-19.1) were HBs Ag-positive.
- In 86.6% of patients screened, the HBs Ag test was the only one implemented, and 70.9% of the tests were performed before ART initiation.

Figure 2: Proportion of patients screened for hepatitis B virus infection, by year and country



Results

- The increase in HBV testing over time was largely due to programmatic changes and only 3.8% of tests were clinically driven (in the context of elevated transaminases).
- Age >45 years (odds ratio: 1.11, 95% confidence interval: 0.88-1.40) and male sex (1.07, 0.88-1.31) were not associated with HBsAg screening.
- Among HBV-infected patients, 59 (80.9%) received TDF-containing ART regimens (Figure 3).
- Only 30 (1.0%) patients were screened for HCV infection (including 19 in Senegal) and one of them (3.3%, 95% CI 0.84-17.2) was positive.

Figure 3: Proportion of patients on tenofovir-based regimen by year and HBs Ag status

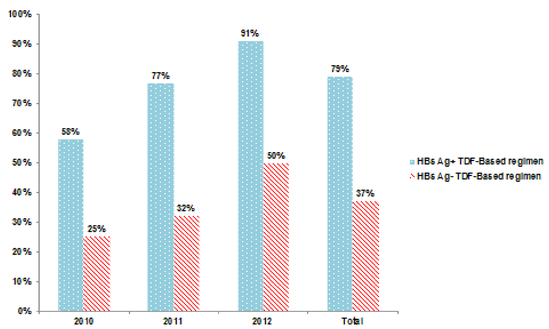


Table: Characteristics of participating sites and patients

Characteristics	Benin	Burkina Faso	Cameroon	Cote d'Ivoire	Kenya	Senegal	Togo	Uganda	Zambia
Number of sites	1	1	1	3	1	1	1	1	1
Type of care	tertiary	tertiary	tertiary	primary/ tertiary	tertiary	tertiary	tertiary	tertiary	primary
Number of patients	300	300	298	900	299	297	300	285	300
Female sex (%)	66.0	72.0	65.8	64.6	63.2	60.3	65.7	67.0	53.9
Median age (IQR)	35 (30-42)	35 (30-42)	38 (32-44)	38 (33-45)	37 (32-44)	41 (35-49)	35 (30-43)	35 (28-42)	37 (31-42)
TDF-based ART (%)	13.0	29.0	64.1	33.7	40.8	41.1	14.7	21.4	88.3

Conclusions

- Between 2010 and 2012, the systematic screening for HBV infection in HIV-positive patients before ART initiation was limited in many African countries and its uptake differed widely across clinics.
- Overall, the prescription of TDF increased over time, with >90% of HIV/HBV-coinfected patients receiving this drug in 2012.
- The proportion of patients tested for HCV infection was very low (1%).
- The increasing availability of HBs Ag rapid tests and TDF as part of first-line ART should encourage HIV programs to improve HBV screening rates.

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