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Original article

Changes in viral hepatitis B screening practices over time in West African HIV clinics

Dépistage du virus de l'hépatite B dans des centres de prise en charge de personnes vivant avec le VIH en Afrique de l'Ouest

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Abstract

Background. – We aimed to describe changes in hepatitis B screening practices over a 3-year period among HIV-infected patients in West Africa.

Methods. – A medical chart review was conducted in urban HIV treatment centers in Ivory Coast (3 sites), Benin, Burkina Faso, Senegal, and Togo (1 site each). Among patients who started antiretroviral treatment between 2010 and 2012, 100 per year were randomly selected from each clinic. Demographic, clinical, and laboratory data was collected using a standardized questionnaire. We assessed changes in the proportion of patients screened over time and identified predictors of screening in a multivariable logistic regression.

Results. – A total of 2097 patients were included (median age: 37 years, 65.4% of women). Overall, 313 (14.9%) patients had been screened for hepatitis B, with an increase from 10.6% in 2010 to 18.9% in 2012 ($P < 0.001$) and substantial differences across countries. In multivariable analysis, being aged over 45 years (adjusted odds ratio: 1.34 [1.01–1.77]) and having an income-generating activity (adjusted odds ratio: 1.82 [1.09–3.03]) were associated with screening for hepatitis B infection. Overall, 62 HIV-infected patients (19.8%, 95% confidence interval: 15.5–24.7) were HBsAg-positive and 82.3% of them received a tenofovir-containing drug regimen.

Conclusion. – Hepatitis B screening among HIV-infected patients was low between 2010 and 2012. The increasing availability of HBsAg rapid tests and tenofovir in first-line antiretroviral regimen should improve the rates of hepatitis B screening.

Keywords: HBV; Screening; HIV-infected patients; Sub-Saharan Africa

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Résumé

Contexte. – Décrire les pratiques de dépistage de l'hépatite B au cours du temps chez les patients infectés par le VIH en Afrique de l'Ouest.

Méthodes. – Une enquête a été menée dans les centres urbains de prise en charge du VIH en Côte d'Ivoire (3 sites), Bénin, Burkina Faso, Sénégal et Togo (1 site chacun). Parmi les patients ayant été mis sous traitement antirétroviral entre 2010 et 2012, 100 ont été tirés au sort chaque année dans chaque clinique. Les informations ont été recueillies à partir des dossiers médicaux. Les facteurs associés au dépistage de l'hépatite B ont été recherchés par régression logistique.

Résultats. – Au total, 2097 patients ont été inclus (âge médian de 37 ans, 65,4 % de femmes). Le dépistage de l'hépatite B a été réalisé chez 313 (14,9 %) patients, avec une augmentation au cours du temps (de 10,6 % en 2010 à 18,9 % en 2012, $p < 0{,}001$), et une variation entre les centres. Un âge > 45 ans (rapport de cotes ajusté : 1,34 [1,01–1,77]) et une activité génératrice de revenus (rapport de cotes ajusté : 1,82 [1,09–3,03]) étaient associés au dépistage de l'hépatite B. La prévalence de l'hépatite B chronique (AgHBs+) était de 19,8 % (15,5–24,7) et 82,3 % des co-infectés étaient traités par ténofovir.

Conclusion. – Entre 2010 et 2012, le dépistage de l'hépatite B chez les patients infectés par le VIH était faible. La disponibilité croissante des tests rapides de recherche de l'AgHBs et du ténofovir devrait améliorer ce dépistage.

Mots clés : VHB ; Dépistage ; Patients infectés par le VIH ; Afrique subsaharienne

1. Introduction

At the end of 2014, the World Health Organization (WHO) estimated the number of HIV-infected people at 36.9 million (34.3–41.4) and at 2.0 million (1.9–2.2) the annual number of new infections worldwide [1]. Sub-Saharan Africa remained the most affected region, with 25.8 million (24.0–28.7) HIV-infected people and an estimated 70% of new infections [1]. Sub-Saharan Africa is also one of the most affected regions for hepatitis B virus (HBV), with more than 8% of the general population presenting with chronic HBV infection [2–4]. HBV infection is one of the main causes of cirrhosis and hepatocellular carcinoma (HCC) [5–8]. However, most patients infected with HBV are unaware of their status as routine screening for HBV in the general population is lacking [4].

As both infections share the same contamination routes (blood or sexual routes, or mother-to-child transmission), HIV-HBV co-infection is frequent, with 8–25% of HIV-infected patients who also present with chronic HBV infection in Sub-Saharan Africa [9–15]. HIV-HBV co-infected patients are at higher risk of death, poor immune reconstitution, and hepatotoxicity on antiretroviral therapy (ART) than patients only presenting with HIV infection [16–20].

WHO has been recommending since 2010 the systematic HBV screening of HIV-infected patients before ART initiation. Most national HIV/AIDS programs have now integrated this recommendation. HBV status ascertainment in HIV-infected patients is very important as it helps optimize the management of HIV-HBV co-infected patients with the initiation of a first-line ART combining at least two molecules active against both HIV and HBV, namely tenofovir (TDF) and lamivudine (3TC) or emtricitabine (FTC) [21]. HBV status ascertainment in HIV-infected patients also contributes to guiding the second-line treatment choice in case of failure of the initial ART.

The prevalence of HBV among HIV-infected patients in Sub-Saharan Africa has already been measured, but the implementation of guidelines on systematic HBV screening in HIV-infected patients at initial management or ART initiation has rarely been documented. A recent study conducted in Zambia in 15 healthcare facilities of Lusaka revealed a sharp increase in systematic HBV screening in HIV-infected patients between 2008 (1.0% of HIV-infected patients) and 2012 (46.8%) [22], with substantial differences in terms of timing of screening implementation by facility. To our knowledge, in West Africa, detailed data on HBV screening practices in HIV-infected patients and on changes in these practices over time is still lacking.

We aimed to measure the proportion of treated HIV-infected patients screened for HBV, to describe changes in HBV screening practices over time, and to assess factors associated with HBV screening in a sample of HIV clinics in West Africa.

2. Methods

2.1. Type of study

We performed a retrospective, multicenter study in several HIV clinics of West Africa that are part of the IeDEA Collaboration (International epidemiological DataBase to Evaluate AIDS) [23].

2.2. Study framework

We selected five French-speaking countries for the study (Benin, Burkina Faso, Ivory Coast, Senegal, and Togo). We selected a university hospital reference center for HIV management in each country. Two urban health clinics with several years of experience in HIV-infected patient management were also selected in Abidjan, Ivory Coast.

2.3. Study sample and data collection

Each year, a total of 100 individuals were randomly selected in each clinic (i.e., maximum of 300 patients per clinic) among adult HIV-infected patients (≥ 18 years) initiated on ART in the participating clinics between January 1, 2010 and December 31,

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