

Predominance of Hepatitis B Virus Genotype A Among Treated HIV Infected Patients Experiencing High Hepatitis B Virus Drug Resistance in Nairobi, Kenya.

Mabeya S.N., Ngugi C., Lihana R.W., Khamadi S.A., Nyamache A.K.

Abstract

Hepatitis B virus (HBV)-HIV coinfections are becoming common with information on HBV genetic diversity and drug resistance still remaining elusive. To evaluate the HBV genetic diversity and drug resistance-associated mutations among drug-experienced HIV patients, the genetic analysis of the partial HBV-pol-reverse transcriptase gene was successfully sequenced from 13 samples. Analysis of the sequences showed that all (11) the sequences belonged to genotype A. Nucleos(t)ide drug resistance mutations were found in 6 patients. Five subjects had rtV173L, rtL180M, and rtM204V and one with rtL180M and rtM204V major mutations. HBV genotype A remains the most predominant genotype circulating in Nairobi city with detected high level of HBV drug resistance to lamivudine, telbivudine, and emtricitabine. The detected circulating HBV genotype A in Nairobi reflects its possible spread in the population with its origin being within the country. We suggest that patients should not be on lamivudine monotherapy. These individuals should be managed on combination of tenofovir plus lamivudine or emtricitabine therapy to prevent the emergence of HBV drug resistant variants alongside a continuous surveillance monitoring of drug resistance and HBV genotypes.

KEYWORDS: HBV drug resistance; HIV; Genotypes