

Letter to the Editor

Facing the challenges of hepatitis B management in a developing country

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The following Hepatitis B case highlights some of the challenges faced by specialist practitioners in the field of hepatology in Nigeria. A 30-year-old man presented in the hospital for evaluation one year after his positive Hepatitis B surface antigen (HBsAg) test. He was asymptomatic at presentation. A detailed history revealed that the patient had had the HBsAg test done as part of the requirements for blood donation. He was then referred to a general practitioner who did not conduct further investigations but swiftly commenced him on a three-month course of 100mg Lamivudine daily and pronounced him cured of the infection. The patient had completed this three-month course six months prior to presentation at our hospital. He then had the tests repeated of his own volition and found that he was still HBsAg positive.

At presentation, the young man was anxious but still asymptomatic and the results of further investigations were instructive. He had a twofold elevation of serum transaminases- alanine transaminase (ALT) and aspartate transaminase (AST)- levels and was Hepatitis Be antigen positive. The quantification of hepatitis B virus (HBV) DNA levels from the patient's serum by standard procedure on COBAS TaqMan (Roche Molecular Systems, Branchburg, NJ, USA) was over 170 million IU per mL. The patient then commenced therapy with 180 µg per week of Interferon 2 α along with 300 mg of Tenofovir (Gilead Sciences, CA, USA) daily. The treatment was well tolerated and the repeat quantification of HBV DNA was 65,566 IU per ml after 12 weeks of therapy. He is still compliant with

medications and plans to complete 48 weeks of the therapy.

As exemplified in this case, the first problem Nigeria faces is the relative ignorance of the populace about HBV infection even though we live in a hyperendemic zone with an estimated carriage rate of 10%[1]. The unfortunate consequence of this fact is that many patients present with the advanced sequelae of HBV infection such as liver cirrhosis and hepatocellular cancer and are told for the first time that they have been carrying the infection for a long time. The young man we describe here had not even heard of the virus yet he was harboring a viral load count that was not even quantifiable by one of the best measurement techniques in the world.

Secondly, many health care providers are not aware of the existence and importance of HBV infection and even less are informed as to the need for screening and the approach to take to manage patients whose screens are positive. Hence many individuals are not checked for the disease when they present with symptoms of the acute infection and a good proportion of these progress to chronic liver disease. The few who get tested end up not being fully assessed and are then erroneously informed that the infection “cannot be treated” or are commenced on wrong and inefficient therapies. This is particularly sad as there have been huge strides made in the provision and availability of beneficial tools for the patient evaluation. The general practitioner in the index case had commenced treatment of the patient without prior proper assessment/evaluation. Not only had he started a therapy that is no longer considered first line in the management of HBV

infection even in our environment, he had instituted such therapy for an arbitrary period.

The case we describe here is of interest because at the time appropriate therapy was being initiated there was a real chance of primary non-response since it has been established that, in the therapy for HBe positive HBV infection, low pre-treatment viral load levels (HBV DNA below 10^7 IU/ml or $7 \log_{10}$ IU/ml) is an important predictor of HBe seroconversion. Other important pre-treatment factors that are predictive of HBe seroconversion include high serum ALT levels (above three times the upper limit of normal), and high activity scores on liver biopsy [2]. The patient presented here did not have any prior favorable pre-treatment factor (the liver biopsy was not done); hence he had been put in huge danger of therapy failure even before he commenced appropriate treatment measures. It is, however, noteworthy that he had dramatic response to combination therapy (Tenofovir and Interferon) and is well on his way to the goal of sustained undetectable DNA viral levels.

One solution to these problems with HBV management in our country is a concerted, well-coordinated, multi-disciplinary approach in which the populace is made aware of the virus and its potential for causing devastating illnesses with grave public health consequences and great drains on the meager socio-economic resources. The immunization program needs to be stepped up in scope and

availability, and extended to embrace a similar free program for the many adults who are HBsAg negative at screening but who are at increased risk of infection. Complementary screening programs should be instituted at strategic points (mass elementary school screening in particular) to identify infected children who can then be referred for evaluation. Furthermore, health-care providers should be educated as to the importance of the infection. The value of prompt evaluation, proper understanding of the results of further tests, and referral to experts for the institution of appropriate therapy cannot be overemphasized.

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