

Hepatitis B surface antigen seroconversion in HBeAg negative chronic hepatitis B patient during entecavir treatment

To the Editor,

Chronic hepatitis B (CHB) infection is still a huge public health problem despite the development of new drugs for its treatment, and complications of end-stage liver disease due to this infection results in one million deaths worldwide annually (1). The ideal end-point of therapy is hepatitis B surface antigen (HBsAg) loss with or without HBs seroconversion. However, it is frequently not achievable in most cases, particularly in HBeAg-negative CHB, with currently available drugs (2).

Here we report the case of HBeAg- negative CHB in which HBs seroconversion was achieved during entecavir treatment. A 44-year-old man was referred to a infectious disease outpatient clinic with incidentally found HBsAg positivity on laboratory examination. On initial assessment, laboratory investigation revealed the following: platelets: 210000/mm³, aspartate aminotransferase (AST): 89 (0- 37) U/L, alanine aminotransferase (ALT): 166 (0- 41) U/L, direct bilirubin: 0.39 (0- 0.2) mg/dL, albumin: 4.8 (3.5- 5) g/dL, prothrombin time: 12.5 s, international normalized ratio: 1.1. Hepatitis markers were as follows: HBsAg positive, anti- HBs negative, anti- HBc IgM negative, anti- HBc IgG positive, HBeAg negative, anti- HBe positive. HBV DNA was 110 million IU/mL. Abdominal ultrasonography revealed that the liver parenchyma was normal. Liver biopsy was subsequently performed, and histopathological examination showed ongoing chronic active hepatitis with modified histologic activity index score of 11 and fibrosis score of 0, and therapy with 0.5 mg qd entecavir was started. In the sixth month of treatment, the patient was HBV DNA negative and remained negative during the follow-up period. In the 33th month of treatment, HBs seroconversion was achieved. Serum transaminase levels and anti- HBs titers during the 48-month follow-up period are summarized in Figures 1, 2.

It was shown that the percentage of HBsAg loss in patients with HBe- negative CHB following peginterferon alfa-2a (PEG-IFN- 2a) treatment was 3% and increased from 3% to 9% over the 3-year follow-up period. In addition, HBs seroconversion was achieved in less than half of these patients (3). In contrast to PEG-IFN- 2a, HBsAg loss with or without seroconversion was exceptionally observed during nucleos(t)ide analog (NA) therapy (4,5). In a study including 325 patients with HBeAg-negative CHB who were treated with entecavir, only one patient achieved HBs clearance after 48 weeks of treatment (5). Although HBs loss was an exception with

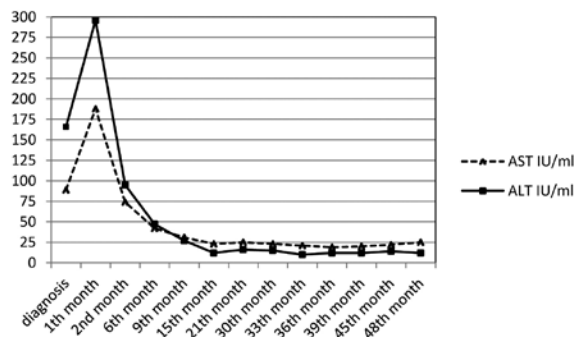


Figure 1. Serum transaminases levels in 48 month follow-up period.

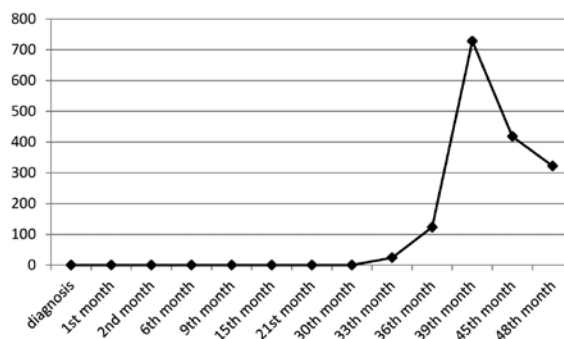


Figure 2. Anti HBs titers (IU/L) in 48 month follow-up period.

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NA therapy, in a recent study including 183 patients treated with lamivudine, HBs seroconversion was achieved in 0.6% at 1 year and increased to 1.9% at 5 years during or after this treatment (6). On the basis of these data, we believe that our case is unique because of relatively rapid HBs seroconversion with entecavir therapy alone.

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