Correlation between Hepatitis B Surface Antigen Titers and HBV DNA Levels: What about the Parameters Affecting this Correlation?

Sir,

We read the article entitled "Correlation between hepatitis B surface antigen titers and HBV DNA levels" by Alghamdi *et al*.[1] with interest. The authors concluded that serum HBsAg titers may correlate with HBV DNA in treatment-naïve HBeAg-negative and HBV genotype D patients. Quantitation of HBsAg titer is cheaper than HBV DNA test. Easy availability and inexpensiveness of this parameter may encourage its utilization in clinical practice in the near future. We would like to thank the authors for their contribution.

Chronic hepatitis B (CHB) is known to be the leading cause of liver cirrhosis and hepatocellular carcinoma (HCC) in the world. Anti-viral therapy may reduce viral replication. It also leads to biochemical remission, improvement of liver histopathology and reduction of cirrhosis and HCC occurrence.[2] Seroconversion of hepatitis envelope and surface antigen and HBV DNA levels are the tools commonly applied for monitoring the disease and predicting the treatment response.[3]

Recent reports have demonstrated that there is a significant correlation between HBsAg titers and intrahepatic HBV DNA and covalently closed circular DNA (ccc DNA) of HBV.[4] This relationship helps the clinician to screen the natural history of HBV infection and predict treatment response in CHB patients.[5]

To our knowledge, clinical factors such as age and liver fibrosis are also important parameters in evaluating CHB patients.[5] In our clinical practice, despite low HBsAg titers and HBV DNA levels, liver fibrosis score levels are found to be higher especially in elderly patients. In this context, it would have been better if the authors[1] had compared HBsAg titers according to these parameters.

Antiviral therapy may alter HBsAg titers in patients with CHB.[6] So it would have been useful if this patient group was compared with the CHB patients receiving antiviral therapy. Like HBV DNA levels, HBsAg titers may vary in terms of four phases of HBV infection.[7] In this view, it would also be relevant, if the authors[1] evaluate the patient group according to the different phases of HBV infection. In addition, the relationship between HBsAg and HBV DNA in the four phases varies according to the genotype.[5] Therefore, the authors could have compared these patients with other patient groups according to the different genotypes of HBV.

We believe that the findings of Alghamdi *et al*.[1] will lead to further research regarding the association between HBsAg titers and HBV DNA levels. It is important that HBsAg titers be considered along with other independent variables (e.g. age, liver fibrosis) to provide the required information.

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