Importance of serum hepatitis B surface antigen and hepatitis e antigen quantification among patients with chronic hepatitis B

To the Editor,

In a recent issue of the Turkish Journal of Gastroenterology, we read with interest the article titled "The importance of serum quantitative levels of hepatitis B surface antigen (HBsAg) and hepatitis e antigen (HBeAg) in children with chronic hepatitis B (CHB)" by Demirören et al. (1). The authors concluded that serum HBsAg and HBeAg titers significantly decreased during interferon treatment; therefore, quantitative HBeAg and HBsAg assays could play an important role in CHB treatment. We would like to thank the authors for their comprehensive contribution. However, we would like to report a few concerns regarding this study from a methodological point of view (1).

First, the small sample size is a concern for the current study; thus, it would have been better if the sample size of the patients with CHB was larger. Second, HBsAg secretion could be strongly affected and altered by hepatitis B genotype; therefore, it would have been useful if the authors had mentioned the genotypes of the patients (2,3). Third, it has been reported that HBsAg levels tend to decrease in order of advancing liver disease from minimal hepatitis to severe fibrosis (4,5). Therefore, it would have been more relevant if the authors had compared HBsAg levels according to the fibrosis score not only in two groups but also separately in six groups. Finally, HBsAg quantification is used to identify the patients who will not benefit from therapy as early as the 12th week of therapy so that interferon therapy may be discontinued or switched by the 12-week stopping rule. Furthermore, we may identify interferon treatment responders using HBsAg levels. In the present study, the authors did not state the number of patients who had a decrease in HBsAg and HBV DNA levels after 12 weeks of interferon therapy. Moreover, the authors did not mention the number of patients who had undetectable HBV DNA titers or higher HBV DNA levels after interferon therapy to demonstrate the post-treatment outcome and relationship between HBV DNA levels and HBsAg quantification. These constitute the limitations of this study not mentioned by the authors.

In conclusion, the availability of standardized assays for HBsAg quantification has led to a new and exciting opportunity in the field of hepatology. The information obtained through HBsAg quantification is complementary to HBV DNA levels. Monitoring HBsAg levels during antiviral therapy has the potential to guide patient management in the future. Further studies are required to understand better the relationship between HBsAg quantification and treatment response.

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