

Evaluation of hepatic histopathological status in patients with HBeAg-negative chronic hepatitis B with serum DNA level greater than 10000 copies/ml

Abstract

Objective: Today, the serum HBV-DNA level in patients with chronic hepatitis B is a prognostic factor and an index for onset of treatment. However, the relationship between serum HBV-DNA level and liver histology is less regarded, and different results have been reported. So in this study, we investigate the relationship between serum HBV-DNA level and liver histopathology in patients with serum HBV-DNA > 10000 copy/ml.

Methods: The positive HBs-Ag individuals who were diagnosed with screening tests and were referred to the infectious and liver diseases clinics of Ardabil Emam Khomani hospital from september 2011 to september 2012, they have been biopsied from liver if they were negative HBe-Ag and they had serum HBV-DNA level >10000 copy/ml and no contraindication for biopsy in sonography. The results of liver biopsy were reported by a pathologist. Data were analyzed with SPSS and P.value equal or less than 0.05 was meaningful.

Results: Of the 82 patients with serum HBV-DNA level higher than 10000 copy/ml, all of them were negative HBe-Ag, positive HBe-Ab, negative HCV-Ab, negative HDV-Ab and negative HIV-Ab.

47(57.3%) were male and 35(42.7%) were female. Their mean age was 35.01 ± 11.7 . the mean of liver histologic stage was 0.44 ± 0.818 (Max=5, Min=0) and the mean of liver histologic grade was 4.05 ± 2.698 (Max= 12, Min=0). There was a significant correlation between serum HBV-DNA level and liver histologic stage, grade and stage + grade ($p < 0.05 = 0.013$, $p = 0.001$ and $p = 0.001$ respectively). This correlation is more significant in males. Compared to males, in women, the relation of serum HBV-DNA level was meaningful only in grade.

There was no correlation between serum HBV-DNA level and liver histology in patients with normal serum ALT level. (ALT ≤ 40 IU/L).

The relationships between age and serum ALT level with liver histology were significant ($p = 0.027$, $p = 0.016$ respectively).

Conclusion: There are the most correlations between liver histology and serum HBV-DNA level, age and serum ALT level, respectively.

The discussion is about the limitations of the liver biopsy as an aggressive diagnostic test. However, the relations of serum HBV-DNA level, age and serum ALT level with liver histology have been demonstrated but diagnosis and treatment of chronic hepatitis B patients and inactive carriers is not only on the basis of such factors and the liver biopsy is the best diagnostic test yet.

Keywords: Chronic hepatitis B- HBV-DNA level – Negative HBe-Ag- Liver histopathology