Study on liver histology in the mild chronic hepatitis B patients with elevated ALT level of two times up limits of normal

L. Zhuang 1, J. You 2, H. Lei 1, Y.L. Li 1, Y.L. Ma 1, M.F. Hu 1, L. Kong 1

1 The Third People’s Hospital of Kunming, Kunming, China
2 The First Affiliated Hospital of Kunming Medical University, Kunming, China
3 Third Municipal People’s Hospital of Kunming, Kunming, China

Background: Chronic hepatitis B (CHB) is a serious health problem worldwide with a substantial minority of patients experiencing premature death due to end-stage liver disease and/or hepatocellular carcinoma. The purpose of the present study is to clarify whether the changes of liver histology in patients with mild CHB, whose alanine aminotransferase (ALT) is more than and less than two times up limit of normal (ULN), are different. The study will provide clue to solve vital problems in CHB treatment. It is meaning for the cases which even though meet the requirements of both the “Chronic Hepatitis B Prophylaxis and Treatment Guide 2010” and HBV DNA detective value demand for normative anti-virus treatment, but ALT $\geq$ 80U/L, and a hepatic tissue biopsy could not be conducted for various reasons for a timely normative anti-virus treatment.

Methods & Materials: One hundred and twenty mild CHB patients were divided into two groups according to baseline serum ALT levels, group A with elevated level of serum ALT $\geq$ 80U/L, and group B with serum level of ALT less than 80U/L. Hepatic punctures and pathology examinations are conducted, and the results are compared for the difference of hepatic tissue histology between the two groups.

Results: There is no obvious differences of hepatic inflammation activity between group A with ALT $\geq$ 80U/L and group B with ALT $< 80U/L (P > 0.05). However, for staging liver fibrosis, it shows an obvious difference as group ALT $\geq$ 80U/L holds a higher S1 ratio (P $< 0.05$). It means group ALT $\geq$ 80U/L bears lower hepatic fibrosis.

Conclusion: Since the present study shows that the comparison of hepatic inflammation activity is statistically meaningless comparing across groups of different ALT, and comparing to group ALT $\geq$ 80U/L, group ALT $< 80U/L$ bears more serious hepatic fibrosis. It suggest that for mild CHB patients, includes both ALT $> 80u$ and ALT $< 80u$ patients, as long as patients meet HBV DNA viral load demond for normative anti-virus treatment, normative anti-virus treatment should be conducted. This study supplements and improves “Chronic Hepatitis B Prophylaxis and Treatment Guide” regarding to antiviral treatment for mild CHB patients with serum ALT abnormal (ALT $< 2 \times$ ULN).

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