

SERUM INTERLEUKIN-8 LEVELS IN PATIENTS WITH CHRONIC HEPATITIS B AND C

Wei-Chen Tai, Chuan-Mo Lee, Yi-Hao Yen, Chao-Hung Hung, Sheng-Nan Lu, Chi-Sin Changchien. Division of Hepatogastroenterology, Department of Internal Medicine, Chang Gung Memorial Hospital, Kaohsiung, Taiwan.

BACKGROUND: Interleukin-8 (IL-8) is a cytokine produced by many types host cells, including monocytes, macrophages, Kupffer cells and hepatocytes. IL-8 can activate neutrophils. Some previous studies showed elevated serum IL-8 levels in alcoholic liver disease especially in alcoholic hepatitis

AIMS: To determine if a correlation exists between circulating IL-8 levels and biochemistry or histological parameters in patients with chronic hepatitis B (CHB) and chronic hepatitis C (CHC).

METHODS: From January 2005 to December 2005, 266 subjects were selected, consisting of 67 healthy controls, 92 CHB patients and 107 CHC patients. Hepatitis was diagnosed by elevated AST and ALT, positive HBsAg or anti-HCV for more than 6 months. Patients were excluded if they had other causes of liver diseases or received anti-viral drugs before. Serum samples were stored at -70 °C until use. Serum levels of IL-8 were determined by ELISA (Quantikine human IL-8, Research and Diagnostics systems, Minneapolis, MN, USA, lower detection limit is 10 pg/ml). Histological activity index (HAI) was classified by modified Knodell HAI score.

RESULTS: Univariate analysis revealed that HAI inflammation score, AST, ALT, CHB, total bilirubin and alpha-fetoprotein (AFP) had positive correlations with log IL-8 levels. Age had a negative correlation with log IL-8 levels. Multivariate analysis showed that ALT elevation and high HAI inflammation score were correlated with IL-8 elevation.

CONCLUSION: Elevation of ALT and high HAI inflammation score were associated with IL-8 elevation in CHB and CHC patients. HAI fibrosis score was not correlated with serum IL-8 levels.

Keyword: chronic hepatitis B, serum interleukin-8, chronic hepatitis C