Serum levels of soluble CD26, a novel prognostic marker for hepatitis E infection

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Background: This study aimed to evaluate of Th1/Th2 ratio by determining serum soluble markers from Th1 and Th2 cells in acute HEV infected patients.

Material/methods: This case-control study was included 35 acute HEV infected patients and 35 age and sex matched anti-HEV negative healthy controls. The serum levels of IFN-γ, IL-4, soluble CD26 (sCD26) and sCD30 were determined by enzyme-linked immunosorbent assay.

Results: The results showed a significant difference in IFN-γ and sCD26 (P<0.0001 and P=0.001) but not IL-4 and sCD30 (P=0.354 and P=0.159) between acute HEV patients and controls, respectively. There was only a positive direct correlation between serum levels of sCD26 and IFN-γ in acute HEV patients (r=0.64, P=0.001). In addition, the ratio of sCD26/sCD30 in acute HEV group was more than two fold higher than in HEV negative controls.

Conclusions: Acute HEV infection shows a pattern of Th1-type immune response and a direct significant positive correlation between the serum level of sCD26 and IFN-γ in acute HEV infected patients, suggesting that the trend of sCD26 levels is a valuable marker for predicting hepatic inflammation in hepatitis E.