Title: Elevated Serum Osteopontin Levels in Chronic Hepatitis C Virus Infection: Association with Autoimmune Rheumatologic Manifestations

Abstract Owing to the suggested role of osteopontin (OPN) in inflammation, autoimmunity and fibrosis, we investigated their serum concentrations in chronic hepatitis C virus (HCV) infected patients with and without autoimmune manifestations and correlated those levels to clinical manifestations and the histological severity of hepatic fibrosis. A total of 70 chronic HCV-infected patients (35 with and 35 without autoimmune rheumatic manifestations) were compared with 35 healthy volunteers matched for age and gender. Epidemiological, clinical, immunochemical and virological data were prospectively collected. OPN serum levels were assessed by an Enzyme Linked Immunosorbant Assay. The mean serum OPN levels were higher in HCV patients with autoimmune rheumatologic manifestations and in patients without; than that for the normal controls (p0 0.000). The mean OPN values progressively increased by increasing severity of liver fibrosis (p00.009). Multivariate analysis revealed that the presence of rheumatologic manifestations had the highest predictive value (b07.141, Beta0 0.414, p00.000) followed by liver fibrosis (b04.522, Beta0 0.444, p00.000) on the variation of OPN levels in our HCV patients. Among the group of patients with HCV and rheumatologic involvement, OPN serum levels were higher in patients with positive cryoglobulin and rheumatoid factor than in those without, and with systemic vasculitis than in those without. Correlation analysis didn't reveal any statistical significance of OPN with age, serum albumin, aminotransferases and viral load. Our data suggests OPN as a promising marker for HCVassociated autoimmune rheumatologic involvement, particularly with regard to development of vasculitis and cryoglobinemia. In addition, it could serve as a biomarker to evaluate the severity of liver damages in HCV infected subjects.

Keywords Osteopontin . autoimmunity . hepatitis C virus . liver fibrosis