

## **Circulating anti-HLA antibodies in patients with chronic hepatitis C: relation to disease activity**

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The human leukocyte antigens (HLA) may influence host immune to infection. In the mean time chronic hepatitis C (CHC) results in the appearance of a variety of autoantibodies. We investigated the frequency of circulating anti-HLA antibodies and none organ specific autoantibodies in patients with chronic hepatitis C at different stages of disease activity. Sixty-seven untreated male patients with CHC (anti-HCV antibody and HCV RNA positive), in whom 38 had elevated serum alanine aminotransferase (ALT) levels and 29 persistently normal serum ALT values, and 23 age-matched normal male subjects were studied. None of them had a history of blood transfusion. Sera were analyzed for immunoglobulin G-anti-HLA class I and class II antibodies by enzyme-linked immunosorbant assay, and for non-organ-specific autoantibodies (antinuclear, anti-smooth muscle, anti-mitochondrial and anti-liver/kidney microsomes type 1 antibodies) using indirect immunofluorescence technique. Circulating anti-HLA class I and class II antibodies were detected in 15/67 (22.4 %) and 11/67 (16.4 %) respectively, while none of normal controls had detectable anti-HLA antibodies in the serum. The frequency of detecting anti-HLA antibodies was significantly higher in patients with elevated serum ALT than persistently normal serum ALT values (31.6 % vs 10.3 %;  $P = 0.039$ ) and was associated with non-organ-specific serum autoantibodies in 11/15 (73.3 %) patients. Those with circulating anti-HLA antibodies had significantly higher levels of serum aminotransferases, gamma-glutamyl transpeptidase, viral load and necroinflammatory and fibrosis scores in liver biopsies than patients with negative anti-HLA antibody ( $P < 0.001$ ). In conclusions, the presence of circulating antibodies against HLA class I and class II molecules in HCV antibodies may represent an autoimmune response to HLA antigens and may play a pathogenetic role in the induction of the HCV-related chronic liver disease.