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Autoantibodies in chronic liver disease

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Some hepatotropic viruses (HBV and HCV) are capable of triggering autoimmune phenomena and manifest the features of autoimmune hepatitis (AIH) in the course of the disease. Careful attention is required to differentiate between AIH and chronic viral hepatitis (CVH) before the selection of treatment. This study was performed to assess the prevalence of rheumatoid factor (RF), antinuclear antibodies (ANA), anti-smooth muscle antibodies (ASMA), anti-mitochondrial antibodies (AMA), anti-parietal cell antibodies (APCA), anti-liver/kidney microsomal antibodies type I (ALKMA1) and anti-neutrophil cytoplasmic antibodies (ANCA) among patients with chronic liver diseases (CLD), and to assess the diagnostic value of these autoantibodies and their relation to HCV viral load and genotype and treatment with interferon-alpha (IFN-alpha). Five groups of patients with CLD (HCV, HBV, HCC, AIH and schistosomal hepatic fibrosis {SHF}) as well as a group of age- and gender-matched healthy controls were enrolled in the study. All the studied persons were subjected to full clinical assessment and laboratory investigations, including liver function tests, hepatitis markers, and HCV RNA by PCR. Detection of ANA, ASMA, APCA, AMA and ALKMA-1 was done by indirect immunofluorescence technique, while ANCA and RF were detected by EIA and latex agglutination test respectively. Results showed a significantly higher prevalence of RF, ASMA and ANCA among patients with CHC, RF and ASMA among HCC patients and ASMA and ALKMA1, among AIH patients as compared to the control group. Patients with HBV and those with SHF had a non-significantly higher prevalence of RF, ASMA and ANCA compared to controls. However, AMA was not detected in this study, and APCA showed no significant difference between the studied groups. The occurrence of these autoantibodies was not significantly related to HCV viral load, HCV genotype or treatment with IFN-alpha. There was a significant association between the occurrence of RF, ANA, ASMA, and ALKMA1 and high ALT levels, and between the occurrence of ANA, ASMA and ALKMA-1 and high AST and ALP levels. In conclusion, autoantibodies are commonly found among patients with HCV infection. The co-existence of HCV infection and autoimmune hepatitis should be considered in patients who are positive for both viral markers and autoantibodies and thorough evaluation of patients must be performed before selection of treatment. Testing for RF, ASMA and ANCA may have a good diagnostic value, however, AMA is the least useful in diagnosis.