

Frequency and role of hepatitis-C virus and type II cryoglobulinemia in membranoproliferative glomerulonephritis

Prakash, S; Dash, SC; Kumar, A; Dinda, AK; Agarwal, SK; Acharya, KS

Date: 2004

Abstract

BACKGROUND: Many studies have claimed a major role of chronic hepatitis-C virus (HCV) infection in immune-mediated diseases such as membranoproliferative glomerulonephritis (MPGN). Chronic HCV infection is also known to produce essential mixed cryoglobulinemia (EMC), which in turn may manifest as vasculitis and cryoglobulinemic MPGN. **OBJECTIVE:** The aim of the study therefore, was to determine frequency of association and pathogenetic role of HCV infection as well as that of EMC in MPGN patients. **METHODS:** Fifty-three adult patients of MPGN were studied for HCV, HBsAg, EMC, C3, anti-nuclear antibody (ANA), rheumatoid factor serologically. Histopathology, immunofluorescence (IF) were conducted in all patients and electron microscopy (EM) in those who were found HCV positive. Simultaneously 37 follow-up patients of HCV associated chronic hepatitis were investigated for EMC, renal functions and urinalysis done for evidence of glomerulonephritis (GN). **RESULTS:** Thirteen percent MPGN patients were HCV positive, however, no viral particle could be seen in electron microscopy in glomeruli of these patients. There was no serologic evidence of HCV induced immune complex GN. None of the MPGN patients showed cryoglobulinaemia. Similarly none from HCV associated chronic hepatitis group had EMC nor showed evidences of glomerulonephritis. **CONCLUSION:** Thirteen percent of adult MPGN patients in north India were seropositive for HCV, indicating significant association. However, clear evidence in favour of its pathogenetic role was lacking in our study. Secondly, this study reveals that MPGN is non-cryoglobulinemic and HCV is not a major cause in our population compared to what is reported from other countries. These observations need confirmation by a larger study.