

Seroprevalence of Hepatitis B and C in HIV Seropositive and Chronic Renal Failure Patients in North India

Sir,

The significant burden of human immunodeficiency virus/hepatitis B virus (HIV/HBV) or HIV/hepatitis C virus (HIV/HCV) coinfection is increasingly being recognized worldwide and in particular within the Asia-Pacific region. Coinfected individuals are at risk from accelerated liver disease and consequently cirrhosis, liver failure, and hepatocellular carcinoma. Also these individuals have altered immunological responses to highly active antiretroviral therapy (HAART) and are at increased risk of drug-related hepatotoxicity. HBV and HCV infections pose increased risk in renal dialysis unit due to the frequent use of blood, blood products and multiple invasive medical procedures. Thus, there is a need to screen for these viruses in HIV seropositive and chronic renal failure (CRF) patients. The present study describes the results of screening for HBV and HCV in 391 HIV individuals and 201 CRF patients. As a control group, 511 antenatal women were also screened for these viruses. The results are shown in Figure 1.

In the HIV group, 8 (2.04%) were HBsAg and 24 (6.1%) were anti-HCV positive. In CRF group, 12 (5.97%) were HBsAg and 7 (3.48%) were anti-HCV positive. Significantly higher seroprevalence of anti-HCV was seen in both the HIV and CRF group as compared to control group. Similarly HBsAg positivity was higher in both the groups

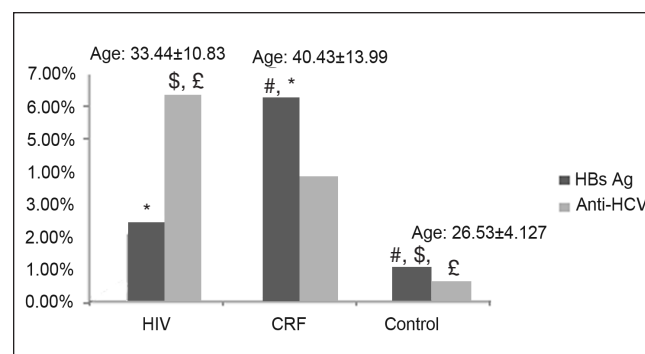


Figure 1: Bar diagram showing mean age \pm SD and percentage positivity of HBsAg and anti-HCV in the HIV, CRF, and control group. Anti HCV antibody in HIV infected vs healthy controls ($P < 0.0001$) £. In CRF, vs healthy controls, HBsAg ($P < 0.0001$) #, anti-HCV ($P < 0.005$) \$, respectively. In HIV vs. CRF seroprevalence of HBsAg was significantly higher in CRF ($P = 0.0123$) *. The male: female ratio in HIV and CRF group was 1.7:1 and 3:1, respectively.

as compared to control group. However, statistically significant difference was seen only in CRF group. As the values are categorical variables therefore level of significance was tested using two-tailed chi-square test.

Studies conducted in India have shown that the prevalence of coinfection of HBV and HIV varies in different geographical area and ranges from 9% to 30% and of HCV with HIV varies from 2% to 8%.^[1] The lower prevalence of HIV-HBV coinfection observed in our study may be due to the fact that HBV vaccination is offered to HIV infected persons who are found to be HBsAg negative as per National Aids Control Organization guidelines.

However, a major limitation of our study is the inability to screen for occult HBV which may account for a sizeable proportion of patients to remain undiagnosed.^[2]

In the CRF group, the HBV positivity was observed in higher number of subjects compared to HCV. The HBV positivity in our study is in accordance with Chandra *et al*^[3] in dialysis/and or renal transplant patients. The HCV prevalence in CRF patients in various studies ranges from 10% to 40%.^[3] Coinfection of HBV and HCV was found in one patient (0.005%) with chronic renal failure. Immunization with hepatitis B vaccine before dialysis and stringent following of universal precautions in dialysis unit will help to decrease the prevalence of both the infections.

In pregnant women, the positivity rate for HBsAg and anti-HCV was low, i.e., 0.78% and 0.58%, respectively which correlates well with other Indian studies.^[4,5]

To conclude, the present study reemphasizes the need for early screening for HBV and HCV infections in HIV seropositive and CRF patients. Though the incidence of Hepatitis B in pregnant women was found to be low, but due to the high risk of perinatal transmission of HBV infection (10%-80%) and its effective prevention by administration of Hepatitis B immune globulin, and Hepatitis B Vaccination,^[6] the universal HBsAg screening of all pregnant women is justified. However, universal screening of all pregnant women for HCV will present a cost constraint in a resource poor country like India and not recommended currently in women who do not have risk factor for HCV infection.

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