Prevalence of Hepatitis C and B Viral Markers in Patients with Chronic Liver Disease: A Study from Northern India

Dear Editor,

We wish to share our experience on the prevalence of hepatitis B virus (HBV) and hepatitis C virus (HCV) in patients with chronic liver disease (CLD) during two year study period. Both of these viruses are transmitted mainly through the parenteral route and therefore a dual infection of these viruses occurs and even persists in the same patient. Seroprevalence studies have also shown coinfection of HBV and HCV, although prevalence may vary from area to area and country to country. In view of this the present study was designed to determine the prevalence of HCV and HBV infection and coinfection of HBV in HCV patients with chronic liver disease.

A total of one hundred and thirty two patients with chronic liver disease, attending the out patient department (OPD) or admitted in the wards of Lok Nayak Hospital, New Delhi during the year Jan 2003 to December 2004 were studied. The study group comprised of 104 male and 28 female patients. The mean age of the patients was 16-72 years. (43.5± 1.7 years). Five millilitre of blood sample was collected aseptically and serum was separated, aliquoted and stored at -20°C until tested. Anti -HCV, HBsAg, Anti-HBc IgM, Anti-HBc IgG were detected by using commercially available kits with known positive and negative controls.

In the present study, HBV infection was detected in 80 (60.6%) cases using all the three markers: HBs Ag (44 cases), anti-HBc IgM (13 cases), anti-HBc IgG (80 cases), similar findings were reported by other workers. HCV infection was present in thirty-four (25.75%) patients with CLD which is in accordance with our earlier study. Twenty-seven (79.41%) cases of hepatitis C patients showed coinfection with HBV (past or present infection); HBsAg was present in 38.23% (13/34), anti-HBc IgM in 5.8% (2/34) and anti-HBc IgG in 79.41% (27/34). In the previous study by Singh et al., it was reported that the prevalence of anti-HCV was higher as compared to HBV in CLD, since only two viral markers i.e., anti HBc IgM and HBsAg were studied. Anti-HBc IgG, an important viral marker for knowing the exposure to HBV in these cases, was not tested and that might be one of the reasons for getting a lower prevalence of HBV as compared to HCV. Eighteen cases of CLD in the present study were cryptogenic (negative for both HCV and HBV). Probably certain HCV variants or other hepatotropic viruses like hepatitis G virus (HGV) or transfusion transmissible virus (TTV) or SEN viruses were present.

Thus, it is concluded from the present study that HBV is still one of the major causes of chronic liver disease followed by HCV in India with more than one-third (27/80) of HCV...
Immunity against Measles among Vaccinated School going Children in Zahedan, Southeast of Iran

Dear Editor,

Measles is an important childhood disease and an acute viral infection, which is very contagious and recovery from it is the rule.1 But serious complications of the respiratory and central nervous system may occur.2 Measles can be prevented with live, attenuated vaccine. In our country (Iran), despite the use of vaccine since 1976, we are still having local epidemics especially in the children aged 15-20 years. Therefore the present study was conducted to determine the level of immunity in this target population in Zahedan.

A total of 375 school going children were selected randomly from eight schools in four areas of Zahedan (a city in the sistan and Baluchestan province in southeast of Iran) in 2000-1. They were the students, who fitted the selection criteria. These criteria included: 1- students who have history of vaccination, based on vaccination card and 2- Iranian nationality. Afghanian students and students who have not received any vaccine, were not included in the survey. After recording the demographic data, 5cc of blood was drawn from each case. These samples were evaluated by haemaglutination inhibition method (HI). According to this method and the type of kit, the titers of 1:4 were positive and protective to measles but the titers < 1:4 were negative and nonprotective to measles.

Of the 375 students (183 female and 192 male) who were evaluated by HI method 298 cases (76.8%) were positive (HI 1:4). The titers of HI in 77 cases (23.2%) were < 1:4. From 375 cases, 349 cases (93%) were vaccinated twice (at the age of 9 and 15 months). 78.6% of this vaccinated group were immune according to this method. Only 7% of the children were vaccinated once. The titers of antibody against measles in the recent group were less than protective level. By using chi-square test, there was no significant statistical difference between the male and female in the immunity level (p > 0.05). Also there was no significant statistical difference in the age and antibody titers between the male and female students (p > 0.05).

Our study showed that 76.8% (298 cases) of total students (375) were immune against measles. In one study in Iranshahr district in 1994 by Moradi et al.,3 among 411 vaccinated children (25-60 months), only 64/3% (271 cases) of the children under study had antibody against measles virus, while 95.6% of this group had been vaccinated. In Moradi study, 89.5% of children had been vaccinated against measles at 9 and 15 months of age and 6% of cases were vaccinated only once but in our study, 93% of children had been vaccinated twice and only 78.6% of them had antibody which is not enough for producing disease-free zone. A prevalence of more than 90% immunization of infants and immunity of 95% in population, has been shown to produce disease-free zone.4 Sarwghad et al repoted that among 172 vaccinated school-aged children in Mashhad, only 71% of cases had antibody against measles and 29% of subjects were seronegative and nonimmune against measles.4 According to our results, it is concluded that the recent vaccination program in Iran (9 and 15 months of age) for production of immunity against measles was insufficient and the children who were vaccinated with patients, coinfected with HBV. The detection of HBsAg alone does not reflect the actual outcome of HBV infection and hence both HBsAg and anti-HBc IgG can help in identifying the true picture as was indicated in another study.5

References

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Received: 07-03-2005
Accepted: 30-03-2005