
HBV, HCV AND SYPHILIS CO-INFECTIONS IN HUMAN IMMUNODEFICIENCY VIRUS POSITIVE BANGLADESHI PATIENTS: OBSERVATION AT TWO REFERENCE LABORATORIES

Dear editor,

Human Immunodeficiency Virus (HIV), Hepatitis B virus (HBV), Hepatitis C virus (HCV) and syphilis share certain epidemiological characteristics. In the post highly active antiretroviral therapy (HAART) era, life expectancy of patients with HIV has increased and the focus has now shifted to the management of concurrent illnesses such as chronic HBV and HCV infections, syphilis and other co-infections which have the potential to increase long-term morbidity and mortality.

Bangladesh currently has very low rates of HIV infection and unfortunately there is no existing information on the prevalence of HBV, HCV and syphilis co-infections among the HIV patients. Therefore, the Department of Virology, Bangabandhu Sheikh Mujib Medical University (BSMMU) and Armed Forces Institute of Pathology (AFIP) Dhaka; two referral centres for HIV/AIDS in Bangladesh, conducted a study on 118 preserved sera of HIV patients (age range 19 months to 58 years, average 31.24 years, 79 males and 39 females) from January 2005 to May 2007. The prospective blood donors (13,500) tested for HCV and HBV during the same period of time in AFIP were regarded as control group.

We found that, the overall prevalence of co-infections in HIV patients was 18.64% (22/118) and with hepatitis viruses alone it was 5.93% (7/118, all male). Triple infection with HIV, syphilis and HCV was detected in one patient only. The rate of detection of HBsAg was higher (4.24%, 5/118) in HIV positive patients than the control group (0.84%, $P < 0.001$), which indicates that the prevalence of HBV in HIV patients is more than the general population of Bangladesh but below the rate found in Western (16%)^[1] and Northern India (5.3%).^[2] The presence of anti-HCV among HIV patients was 1.69% (2/118) which is statistically

significant ($P < 0.05$) when compared with the control group (0.08%). This rate was lower than the rate found in Thailand (7.8%)^[3] and Western (30%)^[1] and Northern India (2.43%).^[2] Though we could not calculate the statistical significance of prevalence of syphilis in the study population due to lack of data in control group, Syphilis was the highest prevalent disease (16/118; 13.55%, 9 males and 7 females) among the HIV positive individuals. This rate was lower than the rate found among the sexually transmitted diseases (STD) suspected clinic attendees of Argentina (59.7%).^[4]

Liver disease due to chronic HBV and HCV infection is becoming a leading cause of death among persons with HIV infection worldwide. Therefore, it would be advisable to detect hepatitis virus co-infections in these patients at the earliest. Syphilis like genital ulcerative STDs provides great opportunity of transmission of HIV. As there is a risk of false-negative serology in syphilis, it is suggested that all HIV-positive patients should be treated with a penicillin based regimen.^[5] Also, patients presenting with syphilis should be offered HIV testing and vice versa. The higher rate of syphilis co-infection in HIV patients of Bangladesh emphasises the need of integrated HIV/STD intervention programs and effective surveillance system. The main limitation of this study was the lack of information about risk behaviours of the study subjects. However, we believe that these results will help to implement universal screening for syphilis, Hepatitis B and C viral infections in all HIV patients of Bangladesh.

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