

Co-infection of hepatitis B virus and hepatitis C virus with human immunodeficiency virus infection: A cross-sectional study

Sir,

Patients with human immunodeficiency virus/hepatitis B virus (HIV/HBV) infection have more severe liver disease and higher liver-related mortality rates than do HBV-monoinfected persons.^[1] The tolerability of HIV medications can be adversely affected by the presence of HBV co-infection.^[2] Some but not all studies suggest that drug-induced hepatotoxicity may be more common among patients with HIV/hepatitis C virus (HCV) co-infection, particularly with the use of HIV-1 proteases inhibitors, and antituberculosis drugs.^[3] Globally, there are some 370 million persons persistently infected with HBV, with 2–4 million individuals estimated to be co-infected with HIV, and chronic HBV.^[4] The main aim of the study was to know the prevalence of HBV and HCV co-infection with HIV in our region. Patients with HIV infection, who attended our dermatology and sexually transmitted

infection (STI) clinic at a tertiary health care center for skin/STI problems, were included. Diagnosis of HIV infection was done by kits provided by the NACO. Diagnosis of HBV infection was done by detection of hepatitis B surface antigen. Infection of HCV was detected by enzyme-linked immunosorbent assay. Route of HIV transmission and profession of the patients were recorded by detailed history. Four hundred and twenty-two patients (258 males and 164 females) were enrolled for the study. The majority of patients were homemakers (39%) followed by laborers (23%) and truck/taxi drivers (15.8%). In majority of patients (91%), route of HIV transmission was heterosexual contact. Out of these, only 14 (3.3%) were found to be infected with HBV infection. Among HBV positive patients, 13 were males and one was female. In most of the patients (13 patients), HBV infection was transmitted through heterosexual contact. One patient acquired infection through his mother. One hundred forty-five patients were tested for HCV, but none of the patients was found to be infected with HCV. Systematic review and meta-analysis of the prevalence of hepatitis B in India revealed true prevalence in nontribal populations is 2.4% (95% confidence interval [CI]: 2.2–2.7%). True prevalence among tribal populations is 15.9% (CI: 11.4–20.4%).^[5] Our study showed co-infection of HBV with HIV is less, and HCV co-infection is rare in our region.

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Conflicts of interest

There are no conflicts of interest.

Satyendra Kumar Singh, Swati Singh, Gopal Nath¹, Manoj Kumar Srivastava²
Departments of Dermatology and Venereology and ¹Microbiology, Institute of Medical Sciences, Banaras Hindu University, ²Department of Medicine, Kashi Medicare Hospital, Varanasi, Uttar Pradesh, India

Address for correspondence:

Dr. Satyendra Kumar Singh,
Department of Dermatology and Venereology, Institute of
Medical Sciences, Banaras Hindu University,
Varanasi, Uttar Pradesh, India.
E-mail: drsatyendraderma@gmail.com

REFERENCES

1. Thio CL, Seaberg EC, Skolasky R Jr, Phair J, Visscher B, Muñoz A, *et al.* HIV-1, hepatitis B virus, and risk of liver-related mortality in the multicenter cohort study (MACS). *Lancet* 2002;360:1921-6.
2. den Brinker M, Wit FW, Wertheim-van Dillen PM, Jurriaans S, Weel J, van Leeuwen R, *et al.* Hepatitis B and C virus co-infection and the risk for hepatotoxicity of highly active antiretroviral therapy in HIV-1 infection. *AIDS* 2000;14:2895-902.
3. Sadaphal P, Astemborski J, Graham NM, Sheely L, Bonds M,

Madison A, *et al.* Isoniazid preventive therapy, hepatitis C virus infection, and hepatotoxicity among injection drug users infected with *Mycobacterium tuberculosis*. *Clin Infect Dis* 2001;33:1687-91.

4. Alter MJ. Epidemiology of viral hepatitis and HIV co-infection. *J Hepatol* 2006;44 1 Suppl: S6-9.
5. Batham A, Narula D, Toteja T, Sreenivas V, Puliyel JM. Systematic review and meta-analysis of prevalence of hepatitis B in India. *Indian Pediatr* 2007;44:663-74.

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