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Predictors of loss of hepatitis B surface antigen in patients co-infected with HIV and HBV

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Co-infection with human immunodeficiency virus (HIV) and hepatitis B virus (HBV) poses a treatment challenge. In Western Europe and the United States, chronic HBV infection has been found in 6% of HIV-positive patients and this co-infection is well known to be associated with increased liver-related morbidity and mortality. However, factors associated with HBV surface antigen (HbsAg) loss in HIV and HBV co-infected patients remain unclear.

A research article to be published on March 7, 2010 in the World Journal of Gastroenterology addresses this question. The research team from St.Luke's-Roosevelt Hospital Center, New York City, USA performed a retrospective chart review of 5681 patients followed up at St.Luke's-Roosevelt Hospital HIV clinic (the Center for Comprehensive Care) in New York City from Jan 1999 to May 2007. HIV and HBV co-infection was defined as positive HIV infection and HBsAg serology. The authors compared patients with HBsAg loss to the rest of the cohort at baseline and at time of loss of HBsAg. Clinical and laboratory parameters including baseline and follow-up HIV viral loads, CD4 cell counts, alanine aminotransferase (ALT) levels, HCV co-infection, demographics, and duration of anti-HBV therapy were analyzed to determine factors associated with loss of HBsAg.

Of the 5681 HIV infected patients in the cohort, 355 patients were HIV and HBV co-infected and were evaluated. Of these, 226 patients with

more than 12 mo follow-up were included in the further analysis to better estimate factors associated with loss of HBsAg in the long-term follow-up. The patients were observed for a mean duration of 45.6 mo (range, 20.8□□.1 mo). During the follow-up period, 21 patients lost HBsAg.

In the univariate analysis, baseline CD4 cell count was associated with loss of HBsAg (P = 0.052). Other factors, including baseline ALT, presence of hepatitis C virus co-infection, baseline HIV viral load, HIV viral load at end of follow-up, CD4 cell count at end of follow-up, CD4 cell count gain, and treatment with dually active antiretrovirals were not related to loss of HBsAg .

Cox regression analysis revealed that baseline CD4 cell count > 500 cells/mm3 was associated with loss of HBsAg.

The study showed an interesting association of HBsAg loss in HIV-HBV co-infected patients with higher CD4 cell count, suggesting that T-cell cytolytic activity against HBV may still be effective in clearing HBV infection.

More information: Psevdos G Jr, Kim JH, Suh JS, Sharp VL. Predictors of loss of hepatitis B surface antigen in HIV-infected patients. World J Gastroenterol 2010; 16(9): 1093-1096
www.wjgnet.com/1007-9327/16/1093.asp

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