Reply to Sheng et al

TO THE EDITOR—We appreciated Sheng and colleagues’ interest in our article that examined the incident infection of hepatitis B virus (HBV) in human immunodeficiency virus (HIV)-infected men who have sex with men (MSM) [1]. Sheng et al also analyzed the frequency of HBV incident infection in 65 HIV-infected patients who had been negative for all HBV serological markers (HBV surface antigen [HBsAg], antibody to HBsAg, and antibody to HBV core antigen) at baseline. They found a lower rate of HBV incident infection during the period the patients were on lamivudine (LAM)—containing antiretroviral therapy (ART) than during the period they were not on LAM-ART, which supports our finding of prophylactic effect of ART on HBV incident infection, although the difference in the incidence rate in their data did not reach statistical significance [2]. However, their incidence rates in Taiwan were much higher than ours in Japan (17.40 vs 6.43 per 100 person-years not on LAM-ART, 14.48 vs 0.860 per 100 person-years on LAM-ART; tenofovir disoproxil fumarate [TDF] ART period was excluded). Based on their data, Sheng et al insisted that prophylactic effect of LAM-ART on HBV infection may be limited in their setting, probably because of much higher prevalence of chronic HBV infection among the HIV-infected patients and the general population in Taiwan than that in Japan. We would like to add another explanation for the discrepancy between their and our data. Prophylactic effect of LAM-ART on HBV infection is maintained on the premise of good medication adherence. Our study strictly enrolled MSM, whereas Sheng and colleagues enrolled the patients with more heterogeneous background, including injection drug users [3]. The inclusion of injection drug users might not only increase the risk for HBV exposure but also undermine adherence to ART among their study population [4]. On the other hand, in our study, 7 HBV incident infections were observed during LAM-ART period and the HIV load around the time of incident infection remained below the detection limit in all of them, indicating excellent adherence to ART.

Another finding in our study is that LAM may have preventative effect against development of chronic infection even after the acquisition of HBV infection [1]. This preventative effect is also clearly observed in Sheng’s study; the rate of chronic infection development was 50.0% and 9.5% during the no LAM-ART period and LAM-ART period, respectively [2]. Early introduction of LAM- or TDF-ART can be recommended to HBV-naive patients for prevention of HBV incident infection, and furthermore, for prevention of chronic infection development even after the acquisition of HBV infection. However, because the prophylactic effect of LAM- and TDF-ART against HBV infection depends on medication adherence and drug-resistant HBV strains may evade the effect, the importance of HBV vaccination should not be undermined as Sheng and colleagues suggested.

Note

Potential conflicts of interest. H. G. has received honoraria from MSD K.K., Abbott Japan, Janssen Pharmaceutical K.K., Torii Pharmaceutical, and ViV Health care. S. O. has received honoraria and research grants from MSD K.K., Abbott Japan, Janssen Pharmaceutical K.K., Pfizer, Roche Diagnostics K.K., and ViV Healthcare, and has received honoraria from Astellas Pharmaceutical K.K., Bristol-Myers K.K., Daiichisankyo, Dainippon Sumitomo Pharma, GlaxoSmithKline, K.K., Taisho Toyama Pharmaceutical, and Torii Pharmaceutical.

Both authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

Hiroyuki Gatanaga1,2 and Shinichi Oka1,2
1AIDS Clinical Center, National Center for Global Health and Medicine, Tokyo; and 2Center for AIDS Research, Kumamoto University, Japan

References


Correspondence: Hiroyuki Gatanaga, MD, AIDS Clinical Center, National Center for Global Health and Medicine, 1-21-1 Toyama, Shinjuku-ku, Tokyo 162-8655, Japan (higatanaga@acc.ncgm.go.jp).

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