Effects of ETV or TDF on renal function in patients with HBV-related cirrhosis: Outcome at 2 years
Department of 1Internal Medicine, 2Institute of Gastroenterology, Yonsei University College of Medicine, Seoul, Korea, 3Severance Liver Center, Severance Hospital, Seoul, Korea
1Jihye Park, Kyu Sik Jung, Jun Yong Park, Beom Kyung Kim, Seung Up Kim, Do Young Kim, Sang Hoon Ahn, Kwang-Hyub Han

Background/Aims: There is controversy about renaleffects of nucleos(t)ide analogues in patients with chronic hepatitis B (CHB), especially compensated and decompensated HBV-related cirrhosis. We aimed to compare the impact on renal function in HBV-related cirrhosis patients treated with entecavir (ETV) or tenofovir (TDF).

Methods: From 2012 to 2015, 239 consecutive treatment-naïve patients with HBV-related compensated and decompensated cirrhosis treated with ETV (n = 166) and TDF (n = 73) for at least 96 weeks with baseline estimated glomerular filtration rate (eGFR) ≥ 50 mL/min, were enrolled. Serum creatinine-based equations (ie, Modification of Diet in Renal Disease) was used to estimated GFR (eGFR). Results: The median age of the patients (158 men, 81 women) was 56.0 years. The baseline characteristics were comparable between these two groups. In ETV-treated patients, the mean eGFR decreased by 6.0% at week 96 compared with the eGFR at baseline (MDRD formula in mL/min/1.73 m²). In TDF-treated patients, the mean eGFR decreased by 6.1% at week 96 compared with the eGFR at baseline. A significant reduction in the eGFR was found in two groups. Similar results were shown for creatinine. By multivariate analysis, the only significant factor associated with an increase in eGFR ≥ 20% was pre-existing renal insufficiency. (adjusted odds ratio [OR], 0.809; 95% confidence interval [CI], 0.668-0.968; p = 0.031).

Conclusions: In patients with HBV-related compensated and decompensated cirrhosis, ETV and TDF have similar renal safety profile and treatment with ETV or TDF can potentially induce renal impairment.

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Comparison of Efficacy of Tenofovir and Entecavir in Chronic Hepatitis B Patients with High HBV DNA
Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine, Seoul, Korea
1Hongkeun Ahn, Yoon Jun Kim, Hyeki Cho, Young Youn Cho, Minjong Lee, Jeong-Ju Yoo, Yuri Cho, Dong Hyeon Lee, Eun Ju Cho, Jeong-Hoon Lee, Su Jong Yu, Jung-Hwan Yoon

Background and Aim: High Hepatitis B Virus (HBV) DNA is associated with increased risk of cirrhosis and hepatocellular carcinoma in chronic hepatitis B patients. There are few studies comparing the efficacy of tenofovir disoproxil fumarate (TDF) and entecavir (ETV) in patients with high HBV DNA. This study aimed to evaluate the efficacy of TDF and ETV in treating chronic hepatitis B patients with high HBV DNA. Methods: We conducted a retrospective analysis of data from 135 consecutive chronic hepatitis B patients with high HBV DNA titers (≥10⁸ IU/mL). We included nucleos(t)ide analogue (NA) treatment-naïve patients or NA-experienced patients without detectable genotypic resistance. 54 patients were treated with TDF and 81 were treated with ETV. Complete virologic response (CVR) rate in two groups was analyzed by Kaplan-Meier curve analysis and Cox proportional hazards model. Results: The median duration of follow-up was 16.6 months. The median time to CVR was 12.8 and 18.8 months in TDF group and ETV group, respectively (p = 0.025 by log-rank test). In multivariate analysis, TDF group had significantly higher probability of CVR (hazard ratio [HR] = 1.64, 95% confidence interval [CI] = 1.04-2.62; p = 0.033) after adjustment for age, HBeAg status, and previous NA experience. The cumulative probability of HBsAg loss was not significantly different between two groups (p = 0.163 by log-rank test). None of the patients had discontinued medication due to adverse reactions and GFR at each time point was not significantly different in two groups (p = 0.106 by linear mixed model). Conclusions: Tenofovir disoproxil fumarate is superior to entecavir in achieving complete virologic response in chronic hepatitis B patients with HBV DNA greater than 10⁸ IU/mL.