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Effects of tenofovir alafenamide versus tenofovir disoproxil fumarate on serum lipid profiles in patients with chronic hepatitis B

Abstract: The effect of lipid profiles in patients with chronic hepatitis B (CHB) during tenofovir alafenamide (TAF) treatment remains unclear. We aimed to compare the impact of TAF versus tenofovir disoproxil fumarate (TDF) on the serum lipid profiles in patients with CHB. A total of 430 patients with CHB were retrospectively included from 3 hospitals, including 158 patients treated with TAF and 272 patients treated with tenofovir disoproxil fumarate (TDF) and were followed for a median of 16.0 months and 18.0 months, respectively. The changes of serum lipid profiles during treatment were compared between TDF and TAF groups. In this multi-center real-world retrospective cohort, the cumulative incidence of dyslipidemia was significantly higher in the TAF group compared to TDF group ($P < 0.001$). After TAF treatment, a significant increase of serum TG levels (from 0.83 mmol/L to 1.02 mmol/L, $P < 0.001$) and TC levels (from 4.16 mmol/L to 4.32 mmol/L, $P < 0.001$) was observed. After propensity score matching (PSM), the TAF group remain had a relatively higher incidence of dyslipidemia ($P < 0.001$) compared to TDF group. The TG levels (from 0.83 mmol/L to 1.04 mmol/L, $P < 0.001$) and TC levels (from 4.16 mmol/L to 4.38 mmol/L, $P < 0.001$) were both increased significantly compared to the baseline levels in the PSM cohort. The TAF treatment was an independent factor for elevated TG levels (HR=3.042, 95% CI: 1.486-6.231, $P = 0.002$) and TC levels (HR=9.488, 95% CI: 4.111-21.902, $P < 0.001$) after treatment. Compared to TDF treatment, the TAF treatment was associated with higher incidence of dyslipidemia in patients with CHB. Thus, close monitoring of lipid profiles is needed in patients with CHB who received TAF treatment.

Key words: hepatitis B, tenofovir alafenamide, tenofovir disoproxil fumarate, lipid profile

Biography: Professor Chao Wu is a chief physician in Department of Infectious Diseases, Nanjing Drum Tower Hospital, Affiliated Hospital of Medical School, Nanjing University (Nanjing, China). He is also the professor of Internal Medicine in Medical School of Nanjing University, Nanjing Medical University and Nanjing University of Chinese Medicine. He focused his scientific interests on viral hepatitis and emerging infectious diseases.