

Is Tenofovir Disoproxil Nephrotoxic in All Patients? Long-Term Effects of Tenofovir and Entecavir on Renal Functions in an Endemic Area.

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Abstract

Introduction: Hepatitis B virus (HBV) is one of the main causes of liver related morbidity and mortality in worldwide. This condition is also a significant healthcare problem in Turkey. Entecavir (ETV) and tenofovir (TDF) are potent nucleos(t)ide analogues (NAs) recommended for the treatment of chronic HBV (CHB) infection. As the data on this topic is limited, we aimed to study the association of NAs and nephrotoxicity in our CHB cohort. **Method:** Between the January 2011 and February 2016, there were 294 patients who had been treated with TDF (n=194) and ETV (n=100). Clinical and laboratory data such as demographics, serological markers for HBV, pathology scores and routine blood tests were recorded from the charts. Glomerular filtration rate (GFR) was calculated by using the Modification of Diet in Renal Disease (MDRD) method. Kidney function tests were assessed at baseline and follow-up visits. **Results:** There were 294 patients in the total group. The mean age was 32±11 years, 66% (n=194) of the group was male. The mean follow-up period was 66±18 months. Age and sex distributions and baseline assessments including liver function tests, creatinine, GFR, HBV DNA values and pathology scores (HAI and fibrosis) were similar between TDF (n=194) and ETV (n=100) groups. Creatinin and GFR assessed at the last visit were 0.81±0.01 g/dl and 102.94±19.78 ml/min for TDF and 0.81±0.013 g/dl and 104.65±19.05 ml/min for ETV. These values were not significant between the both treatment groups. In terms of nephrotoxicity, none of the patients had significant changes in terms of creatinine and GFR that may require dose adjustment. **Conclusion:** Herein we showed that the use of both drugs led to a decrease in GFR that was not clinically important in chronic hepatitis B patients with normal baseline renal tests and without co-morbidity. **Key words:** Entecavir, Tenofovir, GFR, Chronic hepatitis B

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