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## Renal function between Tenofovir and Entecavir in post-liver transplanted hepatitis B patients

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**Introduction** : Tenofovir is already accepted as effective and tolerable drug for treatment of hepatitis B virus (HBV) as much as entecavir. There are some concerns about nephrotoxicity of tenofovir in patients with end-stage liver disease or liver recipients. We retrospectively investigated the renal function of tenofovir compare to entecavir in liver recipients with HBV.

**Methods** : Among 468 patients with HBV who were underwent liver transplantation at Samsung Medical Center between 2008 January to 2015 December, tenofovir (n=37) treated group was matched with entecavir (n=132) group. (1:4, matching variables=age, pre-operative HBV DNA, eGFR, CTP score) Baseline characteristics and 1, 2, 3 year follow up eGFR & creatinine levels after operation were compared between both group using GEE(Generalized estimating equation) analysis.

**Results** : Age, pre-operative creatinine, eGFR and hepatic encephalopathy score showed statistical difference between tenofovir (n=39) and entecavir (n=429) group before propensity score matching. After matching, there was no statistical difference in pre-operative characteristics. Post-operative 1-year eGFR showed no statistical difference from pre-operative eGFR in both group. Post-operative 2-year eGFR (5.25 ml/min/1.73m2 decrease, p=0.04) and 3-year eGFR (7.43ml/min/1.73m2 decreased, p=0.02) showed no statistical difference and interaction between tenofovir and entecavir group (p=0.42). Post-operative 1-year creatinine (0.28mg/dl decreased, p=0.02) and 2-year creatinine (0.24mg/dl decreased, p=0.049) showed improvement. 3-year creatinine showed decrease by 20mg/dl without statistical difference (p=0.10) from pre-operative creatinine. There was also no statistical difference and interaction between both group (p=0.38) for creatinine change

**Conclusions** : Tenofovir does not induce renal dysfunction in liver transplant patients with HBV compared to entecavir.

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