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Elimination of chronic hepatitis B in a kidney transplantation recipient via lamivudine monotherapy: A case report

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Introduction
Numerous studies have investigated lamivudine use for the treatment of hepatitis B virus (HBV) infection after kidney transplantation (KT). However, the efficacy and safety of lamivudine after KT remain unclear. A meta-analysis of 14 clinical trials (184 patients) demonstrated a hepatitis B envelope antigen (HBeAg) seroconversion rate of 27% (16 - 39%) and a HBV-DNA clearance rate of 91% (86 - 96%) in lamivudine-treated HBV-infected KT recipients; however, maintaining HBsAg clearance over 10 years has not been reported previously.

Case
A 56-year-old HBV-infected man had undergone KT for chronic glomerular nephropathy 20 years prior. Before KT, serological markers of HBV revealed that the patient was hepatitis B surface antigen (HBsAg)-positive and HBeAg-negative. A daily dose of 25 mg lamivudine monotherapy was started 8 weeks before KT. After KT, 100 mg of lamivudine was prescribed daily for 16 years, but was stopped 4 years prior to presentation. After 42 months of lamivudine treatment, HBsAg cleared, and 32 months later hepatitis B surface antibody (HBsAb) appeared. Four years after lamivudine therapy termination, serological markers revealed that the patient was HBsAg-negative, HBsAb-positive, and HBeAg-negative.

Discussion
HBsAg-positive KT recipients are at increased risk of mortality and graft failure compared to seronegative patients. Natural immunity to HBV may not protect against reactivation in immunocompromised patients. Currently, lamivudine is not the treatment of choice in chronic HBV-infected KT recipients because of its relatively lower treatment rate than other anti-viral agents. Furthermore, it can lead to increase in lamivudine resistance due to mutations in the tyrosine-methionine-aspartate-aspartate (YMDD) locus. We report a case in which chronic hepatitis B remission was sustained for over 10 years via lamivudine monotherapy without YMDD mutation and any adverse effects.

Conclusions
This case describes a sustained cure of chronic HBV infection in a KT recipient without a YMDD mutation via lamivudine monotherapy.