Outcome of Hepatitis B and C Virus Infection on Graft Function After Renal Transplantation


ABSTRACT

Introduction. Chronic liver disease resulting from hepatitis B virus (HBV) and hepatitis C virus (HCV) infections is still a major concern in kidney recipients. It is unclear whether HCV antibody status and markers of HBV infection are associated with renal dysfunction. Thus, we designed a study to investigate the incidence of HBV and HCV infection after renal transplantation and whether these infections alter graft function.

Methods. Fifty-eight patients who underwent renal transplantation participated in the study. Serum creatinine and aminotransferase levels were measured with standard automated analyzers. Anti-HCV antibodies were detected with an enzyme immunoassay, and a reverse transcriptase-polymerase chain reaction (RT-PCR) technique was used to test for HCV-RNA. Serological markers for HBV (HBsAg and anti-HBc antibody) were detected by enzyme immunoassay. All samples from patients who were seropositive for HBsAg or anti-HBc antibody were PCR-tested for HBV-DNA. A serum sample collected from living donors was tested for anti-HCV antibodies and serological markers for HBV. Serum creatinine and aminotransferase levels were also measured in living donors.

Results. Anti-HCV was not detected in serum samples of any cases before transplantation. However, 10 (17.2%) tested positive after transplantation. HCV-RNA was detected in 2 of the 10 patients (3.4% of all patients). None of the pretransplantation serum samples tested positive for HBsAg. However, anti-HBc antibody was identified in 8 (13.8%) of the 58 patients. No HBV DNA was detected in serum samples of the patients with anti-HBc or HBsAg-positive. HBsAg was only detected in 1 (1.7%) recipient after transplantation. None of the 58 patients showed clinical signs or symptoms of renal dysfunction during the study period.

Conclusion. Our data suggest that, neither HBV nor HCV infection appears to cause or contribute to renal dysfunction in the early period (1 year) after renal transplantation. Nevertheless, a long-term consequence of chronic HBV or HCV liver disease or graft loss is not impossible in renal transplant recipients.