Hepatitis C Virus Infection Contracted Just before Kidney Transplantation

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Dear Sir

Hepatitis C virus (HCV) infection is the main cause of chronic hepatitis in hemodialyzed patients and in renal transplant recipients [1]. We report here a case of severe HCV hepatitis occurring 1 month after transplantation in a kidney transplant recipient. The infection was probably of nosocomial origin and contracted a few days before grafting. Diagnosis was difficult because pre- and posttransplantation HCV serology was negative.

A 42-year-old woman began hemodialysis treatment in March 1993 for end-stage renal disease because of reflux nephropathy and received one blood transfusion at this time. HCV serology (using second-generation ELISA) was negative in July and in September 1993. She had antibodies to cyto-megalovirus (CMV) and to hepatitis B virus (HBV). She received a three mismatch cadaver kidney in October 1993. The donor's HCV and HBV serologies were negative. Initial immunosuppression consisted of thymo-globulin 1/amp/10 kg/day during 7 days, prednisone 1 mg/kg tapered to 0.25 mg/kg/day and azathioprine 2 mg/kg/day. Cyclosporine 6 mg/kg/day was introduced 5 days after transplantation. One month after grafting, renal function was normal but the patient was admitted for CMV viremia. After a 14-day ganciclovir treatment, viremia disappeared but serum aminotransferases suddenly rose to 3-4 times the normal values. Sero-logic testing for HBV, HCV and other hepa-totropic viruses were repeatedly negative. Cyclosporine blood level was in the normal range. Liver and gallbladder echography was

normal. Pathological examination of the liver showed active acute hepatitis. Azathioprine was stopped but biochemical abnormalities worsened with icteric cholestasis.

In February 1994, HCV serology turned positive (second-generation ELISA and RIBA) and HCV viremia was detected by PCR. In April 1994, chronic hepatitis persisted and liver examination showed a worsening of the viral induced lesions. Retrospective analysis of the donor's and recipient's sera showed that donor HCV serology and viremia were negative on the day of the graft. Conversely, antibodies to HCV were present and PCR detected a high number copy of HCV genome in the recipient's serum.

The patient contracted HCV infection in the month preceding kidney transplantation. The diagnosis was made difficult because of the negative serology for HCV 1 month before the graft. Moreover, the intense immunosuppression probably rendered antibodies to HCV undetectable in the first 3 months postgrafting. Antirejection treatment at the time of the HCV invasion phase promoted severe chronic hepatitis.

HCV infection is known to be both trans-fusional and nosocomial in dialysis settings [2,3].

Although we cannot exclude a transfusion transmission of the virus with delayed seroconversion, it is likely that our patient was contaminated during a dialysis session.

Dialysis patients can be contaminated at any time during treatment and may therefore be transplanted when HCV infection has not yet been detected. Severe hepatitis can complicate the posttransplant evolution since viral replication is enhanced by the strong immunosuppression usually administered in the first months after grafting.

It thus appears advisable to perform HCV serology on the day of the renal transplantation for all kidney recipients in order to detect recently infected patients as recommended by 'France-Transplant'. One should at least regularly perform HCV serology in dialysis patients especially if they are to receive a kidney transplantation.

References

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