EV0412

ePoster Viewing

Clinical ID: infection in the immunocompromised host and transplant recipients

No evidence of occult hepatitis C virus infection among renal transplant candidates

A. Eslamifar[1], A. Ramezani[1], S. Ossareh[1], M. Banifazl[1], H. Keyvani[2], A. Aghakhani[1]

[1]*Clinical Research Dept.- Pasteur Institute of Iran, Tehran, Iran*

[2]*Virology Dept.- Iran University of Medical Sciences, Tehran, Iran*

Objectives: Detection of hepatitis C virus (HCV)-RNA in peripheral blood mononuclear cells (PBMC) and/or hepatocytes in absence of hepatitis C antibody (anti-HCV) or HCV-RNA in serum, designated as occult HCV infection. Patients with end-stage renal disease are at high risk for exposure to HCV infection. Chronic liver disease is a frequent complication after transplantation, and HCV is the leading cause of chronic liver disease among renal transplant recipients. Low concentrations of HCV-RNA have been detected in PBMCs of patients who were cleared HCV either spontaneously or after treatment in end-stage renal disease cases. Thus, occult HCV infection could have a great impact on the management of renal transplant candidates and recipients. The aim of this study was to assess the occult HCV infection in renal transplant candidates.

Methods: A total of 50 anti-HCV negative renal transplant candidates from a main dialysis unit in Tehran, Iran were included in this study. All studied cases were also negative for hepatitis B surface antigen (HBsAg) and anti-human immunodeficiency virus antibodies (anti-HIV). Liver enzymes [Alanin aminotransferase (ALT) and Aspartate aminotransferase (AST)] were determined in all of the cases. The ALT levels above 17 IU/l and the AST levels above 24 IU/l were considered as abnormal in end-stage renal disease subjects. Presence of HCV-RNA in plasma samples of patients was tested by Reverse Transcriptase-Nested Polymerase Chain Reaction (RT-nested PCR). In cases with negative anti-HCV and plasma HCV-RNA, genomic and anti-genomic HCV-RNA was checked in PBMC specimens by RT-nested PCR.

Results: A total of 100 anti-HCV negative renal transplant candidates with mean age 37.8±13 years were enrolled in the study. 52% of patients were male and 48% were female. 88% and 12% of them were under hemodialysis and peritoneal dialysis respectively. 30% and 14% of cases had elevated levels of ALT and AST respectively. 14% of patients had elevated levels of both ALT and AST. HCV-RNA was negative in plasma samples of all anti-HCV negative renal transplant candidates. HCV-RNA was also not detected in PBMC samples of subjects with negative anti-HCV and plasma HCV-RNA.

Conclusion: Occult HCV infection was not detected in our renal transplant candidates despite of elevated liver enzymes in some cases. Nevertheless, further investigations are needed to definitely assess the rate of occult HCV infection in these cases.