High Prevalence of Antibodies to Hepatitis C Virus among Renal Transplant Recipients: Correlation with Chronic Liver Dysfunction

T.	Tekin	Akpolat
N.	Nurol	Arik
T.	Turgay	Arinsoy
C.	Cem	Sungur
M.	Mehmet	Bakkaloğlu
İ.	İlhan	Erkan
Ü.	Ünal	Yasavul
Ç.	Çetin	Turgan
Ş.	Şali	Çağlar

Department of Nephrology, Hacettepe University School of Medicine, Ankara, Turkey

Dr. Tekin Akpolat, Hacettepe Hastanesi, Nefroloji Bölümü, Hacettepe, TR-06100 Ankara (Turkey)

Dear Sir,

Chronic liver disease is a frequent and major complication in renal transplant recipients and contributes greatly to morbidity and mortality in these patients [1]. Hepatitis C virus (HCV) is the most common cause of transplant-associated liver disease [1, 2]. Currently, assays are available to detect antibody to recombinant antigens of HCV (anti-HCV). The aim of our study was to evaluate the prevalence of anti-HCV among renal transplant patients and the possible correlations of anti-HCV with chronic liver dysfunction, graft survival, number of blood transfusions, hepatitis B virus serologic markers and duration of hemodialysis therapy before transplantation in this group of patients.

One hundred and sixty-one patients (119 men and 42 women; mean age 35.6 years, range 18-65) were included in the study. Seventy of 161 patients were transplanted in our unit and the rest were referred from other centers for long-term follow-up. Anti-HCV was measured by a second-generation enzyme-linked immunosorbent assay to C100-3 and 33c antigens of HCV (ELISA, Abbott). Chronic liver dysfunction was considered to be a persistent elevation of the serum alanin aminotransferase levels for more than 6 months. Statistical analysis was performed by the χ^2 test with Yates' correction or Student's test. Ninety-two of 161 patients (57.1%) were anti-HCV positive (table 1), and in the anti-HCV-positive group, the number of patients with chronic liver dysfunction was significantly higher and the duration of hemodialysis treatment was significantly longer than in the negative group. There was no significant difference between the two groups regarding the number of blood transfusions, graft survival and hepatitis B virus serologic markers.

Preliminary surveys of renal transplant recipients have shown an anti-HCV prevalence ranging from 10 to 41% [2-5]. Anti-HCV was positive in 57.1% of patients in the present

study. The majority of patients with chronic liver dysfunction were anti-HCV positive and this confirms the data which indicate that HCV infection is the main cause of chronic liver disease in renal transplant patients [1, 2]. The duration of hemodialysis therapy in the pretransplantation period was significantly longer in the anti-HCV-positive subjects as previously reported in hemodialy-

Table 1. Characteristics of anti-HCV positive and negative patients

Patient characteristics

Anti-HCV (+)

Anti-HCV (-)

Data are mean $\pm$ SEM.

NS = Not significant; RT = renal transplantation; HD = hemodialysis.

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0028-2766/93/

0641-0163\$2.75/0

sis patients. There is no correlation between hepatitis B virus markers and graft survival with anti-HCV positivity in the present study like preliminary surveys [2-4]. In spite of other studies [4, 5], we were unable to show the relationship between the number of blood transfusions and anti-HCV positivity among renal transplant patients like in Alivanis's [2] report.

So, we conclude that in renal transplant recipients, HCV infection is a frequent problem, the modes of HCV transmission have not been clearly identified and more studies are needed to clarify the significance of anti-HCV positivity.

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