Horizontal Transmission of Hepatitis C Virus to the Spouses of Patients on Renal Replacement Therapy

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Dear Sir,

Hepatitis C virus (HCV) is the most common cause of hepatitis in hemodialysis patients and renal transplant recipients. The major transmission routes of HCV infections are blood transfusions and inoculations; furthermore, organ transplantation, vertical and heterosexual transmission have also been documented [1]. In order to evaluate the contribution of end-stage renal disease patients on renal replacement therapy to the spread of HCV infection, we investigated HCV antibody (anti-HCV) and serum alanine amino-transferase levels in the spouses of these patients.

Eighty patients on renal replacement therapy (table 1) and their spouses (28 males, 52 females, aged 37.1 years, range 23-62) and 30 controls (16 males, 14 females, aged 41.5 years, range 26-65) were included in the study. 65 of the 80 patients on renal replacement therapy were sexually active. Anti-HCV was measured by a 2nd-generation enzyme-linked immunosorbent assay to C100-3 and 33c antigens of HCV (ELISA, Abbott). Four of the 80 spouses of the patients on renal replacement therapy were anti-HCV positive and none of the controls were anti-HCV positive. The characteristics of these 4 partners were as follows: (1) 3 of them were female and 1 of them was male with a median age of 37.8 years (range 31-45); (2) all their partners were in the anti-HCV-positive group (3 renal transplanted and 1 hemodialysis patients); (3) they did not share any risk factor including blood transfusion for HCV infection; (4) 3 of the patients as well as 2 of their spouses had raised serum alanine aminotransferase levels; (5) all of these pairs were sexually active and they were not using condoms during intercourse.

Although there are contrary studies [2], many reports have shown higher anti-HCV

Table 1. Characteristics of patients on renal replacement therapy (means and range)

Hemodialysis patients

Transplanted patients

HD = Hemodialysis; RT = renal transplantation.

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frequency in family members of anti-HCV-positive patients [3]. Data on the horizontal transmission of HCV to household members in patients on renal replacement therapy is still scanty and controversial [4, 5]. It was interesting to observe that all anti-HCV-positive spouses were in the anti-HCV-positive

group. The frequency of anti-HCV is higher (6.8%, 4/59) in the spouses of anti-HCV-positive patients on renal replacement therapy than blood donors in Turkey (0.31%, 4/1,284) [6], but it should be noted that a 1st-generation screening test for HCV had been used in blood donors.

On the basis of our observations and in agreement with Calabrese's [4] report, we conclude that the patients on renal replacement therapy may contribute to the spread of HCV infection either by sexual or household contact, but this is a rare event.

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