Indirect Evidence for Transfusion Role in Conditioning Hepatitis C Virus Prevalence among Dialysis Patients

G.A.		Moroni ^a
P.		Cori ^a
F.		Marelli ^a
M.		Del Prete ^b
P.		Padovese ^b
M.		Gallieni ^b
A.		Anelli ^b
D.		Brancaccio ^b

^aTransfusion Centre and ^bRenal Unit, Ospedale S. Paolo, Milano, Italy

Dr. Diego Brancaccio, Servizio di Nefrologia e Dialisi, Ospedale San Paolo, Via A. di Rudini, 8, I-20142 Milano (Italy)

Dear Sir,

Vaccination, isolation of infected patients and a more accurate handling of bloody material considerably reduces hepatitis B virus diffusion among hemodialysis (HD) patients. Hepatitis C virus (HCV) infection in dialysis patients appears today to be a major emerging problem but only a few and confused data are available in the literature [1, 2]. In order to evaluate the prevalence of HCV infection in our dialysis center, we planned a cross-sectional study testing HCV antibodies in 43 patients on HD treated in a single unit; sera were also taken from 26 nurses and 6 doctors. All patients were HBsAg negative at their admission in the dialysis program; 21 patients (50%) had at least two transfusions before HCV antibodies were tested. The prevalence of HCV antibody was 18.6% for patients (n = 8) and 11.5% for nurses (n = 3), while no doctors presented HCV antibodies. All patients who were anti-HCV positive were also anti-HBc positive and belonged to the subset of transfused patients (fig. 1). Three of 8 HCV-positive patients presented serological alterations suggesting liver involvement. On the other hand, 7 of the 35 HCV-negative patients showed anti-HBc positivity (5 of them were transfused). Our data point to the following conclusions: (1) Prevalence of HCV in the subset of transfused HD patients is 38%, close to that found in other patients submitted to multiple transfusions (hemophiliacs, thalassemics) [3], while its prevalence in nontransfused HD patients is comparable to that found among blood donors in the same area [4].

30

25

20-

15

10-

Anti-HCV positive patients

IZL

Transfused Not transfused

Dialysis patients

Fig. 1. The prevalence of HCV in dialysis patients was 18.6% but only the subset of patients who were submitted to transfusion were HCV positive.

In our Unit transmission of HCV in dialysis patients appears to be strongly related to blood transfusions, as already reported among patients dialyzed in the USA [5]; hopefully, the wider use of erythropoietin will likely contribute to reduce HCV infection in dialysis patients. Staff involved in the direct assistance of infected patients are probably also at risk of HCV infection.

372

Moroni/Cori/Marelli/DelPrete/Padovese/Gallieni/Anelli/Brancaccio

References

- Esteban JI, Viladomiu L, Gonzalez A, Roget M, Genesca J, Esteban R, Lopez-Talavera JC, Hernandez JM, Vargas V, Buti M: Hepatitis C virus antibodies among risk groups in Spain. *Lancet* 1989;ii:294-296.
- Simon NR, Couroucé AM, Kuntzinger HE: Hepatitis C virus serology in hemodialysis patients (abstract). *Kidney Int* 1990; 37:320.
- Evans AA, Cody H, Kuo G, Choo QL, Houghton M, Kathov WN, Dienstag JL: Seroepidemiology of hepatitis c virus (HCV) in selected populations (abstract). *Hepatology* 1989; 10:644.
- Sirchia G, Almini D, Bellobuono A, Giovanetti AM, Marconi M, Mercuriali F, Mozzi F, Parravicini A, Pizzi M, Zanuso F: Preval-