Exposure of Dialysis Care Staff to Patient Blood: It Is More Probable in Hepatitis C Virus-Positive Patients

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Dear Sir,

It is believed that dialysis procedures may constitute a source of hepatitis C virus (HCV) transmission among patients [1, 2] and from patients to their care staff [3].

We have undertaken a prospective study to assess the occupational risk and possible modalities of HCV transmission in our dialysis unit. To pursue this aim, anti-HCV antibody (ELISA² and RIBA²), hepatitis B marker, anti-HIV antibody, and liver function tests in patients (every 3 months) and staff members (every 6 months) were performed. Moreover, patients' dialysis procedure and type of renal failure (acute or chronic) as well as the type of staff exposure (parenteral or not, body parts exposed) and precautions used were recorded after every contamination. Thirty-six staff members (24 nurses, 5 aides, and 7 doctors) and 122 patients (29 on acute haemodialysis, 75 on chronic haemodialysis, and 18 on peritoneal dialysis) were enrolled in the study. During a follow-up period of 14 months, 145 exposures occurred in 10,004 consecutive dialysis procedures.

We found higher exposure rates for haemodialysis procedures in acute versus chronic haemodialysis patients (6.8 and 1.4 per 100 treatments, respectively). According to the 29% anti-HCV prevalence among our chronic haemodialysis patients, exposure occurred in 43% of the HCV-positive patients (fig. 1). So exposures were relatively more frequent in HCV-positive patients. Likely, this finding may be explained by the higher age (65.8 and 60.6 years, respectively) and the longer time on haemodialysis (79.1 and

Fig. 1. Anti-HCV prevalence and exposure rates (%) in chronic haemodialysis patients. sures prevents us from drawing any firm conclusion about the possible transmission route.

References

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Roggendorff M, Cholmakow K, Weise A, Dienhardt F: Transmission of hepatitis C (HCV) from haemodialysis patient to a medical staff member. *Scand J Infect Dis* 1990; 22:757-758. 40.9 months, respectively) of HCV-positive patients which may account for their higher prevalence of proximal (higher pressure and flow) fistulae (42 vs. 26%). Indeed, such factors could make less easy the urgent plugging of the vascular access which was the manoeuvre involved more often in staff exposures (in 38% of the cases). The exposures were not parenteral in most cases (140 of 145). The upper limbs were the exposed body parts in over 90% of the cases and the hands in 60% of them. During the study period and during the following 24 months, no seroconversion occurred among staff members. According to our results, the route of occupational HCV transmission by contact only may probably be ruled out. On the other hand, the low prevalence of parenteral expo-