Is Isolation Needed for Anti-HCV-Positive Hemodialysis Patients?

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Dear Sir, In the December 1994 issue of Nephron, Al-Khader et al. [1] advocated the need for a policy of isolating HCV-seropositive hemodialysis (HD) patients. However, at present, there are conflicting opinions about the need for a separate unit for these subjects [2, 3].

By testing for anti-HCV with EIA-2 and RIBA-2 tests, we examined a cohort of HBsAg(-) and anti-HIV(-) patients on maintenance HD. A total of 49 patients (22 males and 27 females), with a mean age 57.1 ± 17.7 years (range 23-86), on dialysis treatment for 59 ± 57 months (range 1-233) entered the study. We reevaluated our population 1 year later. The universal precautions for preventing cross-transmission of blood-borne pathogens (CDC, Atlanta) were strictly applied. HD monitors were chemically disinfected after each session. We carried out neither an isolation policy nor the use of separate machines for HCV-infected individuals. Dialyzers were not reused. Serum ALT/AST, performed bimonthly, was available for the previous 48 ± 22 months (range 7-81).

In the first survey, anti-HCV positivity was found in 20 of 49 patients ($n = 15$ reactive and $n = 5$ indeterminate cases), with a prevalence of 40.8%. One year later seropositivity was found in 20 of 46 patients ($n = 18$ reactive and $n = 2$ indeterminate cases), with a prevalence of 43.4%. Four patients sero-converted from an indeterminate into a reactive status. Another patient seroconverted from a negative into an indeterminate status: he had never been transfused, showed normal ALT/AST activity, and it is probable that he experienced cross-infection. The calculated yearly infection rate was 3.7% (1 of 27 patients). Once infected, there was no disappearance rate of anti-HCV. Indeterminate results were confirmed or developed a clear positivity.

Anti-HCV positivity was statistically correlated to the duration of dialysis ($p = 0.002$) and to the elevation of transaminase levels ($p = 0.005$). No relation was found to the history of blood transfusion requirements ($p = 0.08$), age, sex, status of hepatitis B virus, and previous surgical procedures. Abnormal liver tests were observed in 40% of anti-HCV(+) and in 7% of anti-HCV(-) patients. No patient had had symptomatic hepatitis or clinical evidence of chronic liver disease. Liver biopsies were not performed.

Our data confirm the high prevalence of anti-HCV antibodies in HD patients, and show an incidence rate lower than reported by 2nd-generation assays [4]. Probable routes of HCV transmission include transfusion and nosocomial spread. HD patients may have a risk of acquiring hepatitis C cross-infection through the sharing of HD machines, but recently Jadoul et al. [3] were unable to demonstrate an association between seroconversion and the lack of regular sterilization of the HD monitors. The diagnostic value of present anti-HCV assays does not differentiate between infectivity and immunity. On the other hand, polymerase chain reaction, which can detect HCV RNA, may be the only means of detection of current HCV infection. This technique, however, is not yet routinely available, and it is limited by false-positives or false-negatives.

Our data confirm that regular HD treatment can be considered a specific, independent risk factor for HCV infection. Nevertheless, further studies are necessary to evaluate the infectivity of anti-HCV(+) pa-

tients, and the potential for cross-infection in the HD setting. Available data do not support recommending an isolation of these patients in separate areas, or a separation on dedicated machines. At present, a policy of isolation would inevitably cluster infective and non-infective subjects. On the other hand, unrecognized infective patients would continue to be dialyzed in common rooms. Moreover, different strains of HCV have been identified and, thus, placing all anti-HCV(+) patients together might enhance their chance of reinfection or superinfection [2]. Taking into account the organizational, economic and social implications too, we believe that segregation of infected individuals is not yet warranted.

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