Hepatitis C Transmission in Dialysis

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Sir,

Several studies have shown that about 20-30% of dialysis patients have antibodies against hepatitis C virus (anti-HCV).

Patients with a history of multiple blood transfusions, intravenous drug abuse or sero-logic evidence of current or previous HBV infection have been found more likely to be anti-HCV positive, while hemodialysis alone did not seem associated with a higher risk for acquiring HCV infection [1].

Conversely, non-A, non-B hepatitis (NANBH) outbreaks in dialysis centers have been reported before the test for anti-HCV became available [2, 3] with 38% of cases probably due to patient-to-patient transmission [3].

More recently, a high frequency of anti-HCV positivity in dialysis patients, even in those never transfused, resulted significantly associated with the length of hemodialysis [4].

We report a case of acute hepatitis C in a patient whose only risk factor was to be dialyzed in an unit where anti-HCV-positive patients were not separated from the other patients.

A 65-year-old man, dialyzed 3 times a week since 1987, in October 1991 developed jaundice, anorexia, nausea, malaise, pruritus. ALT level was 375 U/ml, hemoglobin 11.4 g/dl and total serum bilirubin was 17.6 mg/dl (direct 11.2).

He had been vaccinated in the past against HBV and resulted HBsAg negative, anti-HBs positive and IgM anti-HBc negative. IgM anti-CMV, anti-HSV and anti-EBV were negative. He resulted negative for anti-HCV by a 2nd generation ELISA assay (Ortho), as he had 2 months before.

Ecographic and TAC findings did not show any obstructive cause of the jaundice.

After 1 week, ALT level rose to 575 U/ml and total bilirubin to 33.2 mg/dl. Two weeks later, ALT level was 163 U/ml and total bilirubin 42.8 mg/dl.

On day 20 from hospital admission, the patient seroconverted for anti-HCV (positivity evidenced both by 2nd generation ELISA and RIBA assay, Ortho). He was discharged home 40 days after admission with normal ALT levels and total bilirubin 4.2 mg/dl. Complete biochemical recovery occurred in 2 months.

The patient had never been transfused and, on careful epidemiological investigation, he denied any other risk factors for HCV infection.

A survey conducted in the unit where the patient was dialyzed found an anti-HCV prevalence of 15%; policy adopted in the unit did not include isolation of anti-HCV-positive patients. This report shows that HCV infection in dialysis patients may be acquired via routes of transmission other than transfusion and related to the dialysis environment.

HCV may be introduced into the dialysis units by way of patients who receive multiple transfusions or belong to risk behavior groups (i.e., intravenous drug addiction); these patients may serve as a reservoir for the spread of this infection to other patients and staff. Contamination of environmental surfaces is considered the major route of spread of blood-borne pathogens in the dialysis setting. As for HBV hepatitis, using the same dialysis shift may be one of the most important risk factors [5] also for HCV transmission.

The successful control of this infection in the dialysis setting could be obtained by several ways: (1) testing for anti-HCV all patients before entry; (2) separation of infected patients from other patients by room and machine [6] and survey those negative for sero-conversion, and (3) reducing the need for transfusion (i.e., use of erythropoietin). Moreover, staff should adhere to recommended precautions to avoid both patient-to-patient and occupational transmission.

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