

Seroprevalence of hepatitis B and C in maintenance dialysis in a public hospital in a developing country.

Abstract

BACKGROUND:

Patients with end-stage renal disease (ESRD) on maintenance dialysis are predisposed to hepatitis B virus (HBV) infection for a number of reasons. In a similar way, the prevalence of anti-hepatitis C virus (HCV) antibodies among patients on chronic haemodialysis and peritoneal dialysis is consistently higher than in healthy populations. There are few published data on these diseases in patients undergoing maintenance dialysis in sub-Saharan Africa.

OBJECTIVE:

To determine the seroprevalence of HBV and HCV in patients on maintenance dialysis.

SETTING:

Renal Unit, Kenyatta National Hospital, the largest public referral and teaching hospital in Kenya.

DESIGN:

Cross-sectional descriptive study.

STUDY POPULATION:

All 100 patients on maintenance dialysis during the 9-month study period were evaluated.

METHOD:

The following information was obtained from all the patients: socio-demographic data, date of diagnosis of ESRD and commencement of dialysis, and number of blood transfusions. Additionally, a history suggestive of hepatitis in spouses was looked for and physical examination for tattoos and other scars was carried out. Laboratory investigations included urea, electrolytes and serum creatinine, liver enzymes, hepatitis B surface antigen (HBsAg), immunoglobulin M anti-hepatitis B core antibody (IgM anti-HBc), hepatitis B e antigen (HBeAg) and anti-HCV antibodies. Student's t-test was used to assess the significance of the data collected.

RESULTS:

The results were expressed as mean (+/- SD). Fifty-seven males and 43 females were studied. Mean age was 44.3 +/- 14.6 years. Ten patients (10%) had elevated aspartate aminotransferase (AST) and alanine aminotransferase (ALT) (> 40 U/l for both). HBsAg was found in 8 patients (8%), IgM anti-HBc in 2%, and HBeAg in none. Anti-HCV antibody was found in 5%. Six of the HBsAg-positive patients were on haemodialysis, the other 2 on continuous ambulatory peritoneal dialysis (CAPD). There was no coexistence of HBV and HCV markers. Longer duration of dialysis and the number of blood transfusions were associated with an increased seroprevalence of HBV and HCV.

CONCLUSION:

There is a low seroprevalence of HBV and HCV in our dialysis population. This should not lead to complaisance in screening for these potentially lethal complications.