Urban and rural population comparison of hepatic profile and associated etiology among children with end-stage renal disease

Sir,

The burden of end-stage renal disease (ESRD) in children is different as compared with adults. The burden in rural areas is greater than the burden in urban areas. It should be highlighted that children on dialysis have around hundred times higher mortality rates compared with the general children population.[1] These children die from infections, malignancy, and cardiovascular diseases.[2] Dialysis predisposes to infections such as hepatitis B (HBV) and hepatitis C (HCV) virus infections. HBV is one of the major causes of mortality in such children.[3,4] Furthermore, the duration of dialysis has high predictive risk for HCV infections in these population. This was consistent with a study in which all patients who were anti-HCV positive had been on dialysis for a mean of around 100 months.[5]

A Senegalese study showed 5.6% prevalence of HCV in ESRD patients while it was shown to be 31% in Libya, 20% in Turkey, 50% in Saudi Arabia, and 6.1% in Germany.[6-8]

We did a retrospective study at a government hospital from January to December 2014 Hepatitis B surface antigen (HBsAg) and anti-HCV were tested by *in vitro* immunochromatographic one step assay designed for qualitative determination. Out of 357 patients, 216 belonged to interior Sindh (Rural) while 137 were residents from Karachi (Urban) area of Sindh. About 57.9% (n = 125) were male children from the rural population while 53.3% (n = 73) were male children from the urban population. Unknown etiology was the most frequent observation. Stone formation was the most common overall known etiology among all groups leading to ESRD in these patients. The proportion of hepatitis B positive was not significant in both groups. However, there was statistically significant difference among hepatitis C positive patients (P = 0.033).

Our study highlights a high prevalence of HBV and HCV in pediatric ESRD patients in both urban and rural areas of a developing country. At-risk populations and endemic areas should be identified and loopholes identified which not only will have a big effect on the quality of life of patients but will also play a role in reducing mortality.

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Conflicts of interest

There are no conflicts of interest.

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