

## #1931 - Prevalence of hepatitis B and C infection among hemodialysis children and adolescents in Iran: a single center experience

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**Body**

**Background and Aims:** It is well known that patients undergoing dialysis treatment and in particular hemodialysis (HD), are at increased risk of acquiring hepatitis B virus (HBV) and hepatitis C virus (HCV) infection due to high number of blood transfusion sessions, prolonged vascular access, high exposure to infected patients, and contaminated HD equipment during treatment. Few data are available on the prevalence of HBV and HCV infection among HD children. The aim of this study was to determine the prevalence of hepatitis B and C infection in children with end stage renal disease (ESRD) on HD.

**Materials and methods:** In this cross-sectional study, all children and adolescents with ESRD ( $n = 149$ ) dialyzed at Children's Hospital Medical Center between January 1991 and December 2009 were enrolled into the study. The patients' demographic data, clinical characteristics, and treatment modalities were extracted from hospital profiles of admitted patients. All children who dialyzed in the center were routinely screened for the presence of *hepatitis B* surface antigen (HBsAg), anti-HCV antibody at the initiation of dialysis treatment. HBsAg and HCV antibodies were measured using specific enzyme-linked immunoassay kits as serological testing. All patients with HIV infection were excluded from the study.

**Results:** A total of 149 children (51% male and 49% female) with ESRD were referred for HD treatment during the study period. The mean age of children was 8.80 years (range 3 months to 18 years). Two (2.04%) patients were HBsAg positive, 2 (2.04%) were anti HCV positive. *Co-infection* with both HBV and HCV was found in three

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(2.72%) HD children. The prevalence of HBV was equal to HCV.

All patients with positive HBV and HCV or with *HBV/HCV co-infection* were clinically asymptomatic. Glomerulopathies (22.8%) and reflux nephropathy (16.1%) were the most common causes of end stage renal disease in studied patients. Eighty-two children (57.04%) underwent HD three sessions per week, 32 (21.47%) two sessions per week, 33 (22.14%), onesession per week and two (1.34%) five sessions per week. The mean duration of HD was 34 months. Death occurred in 18 patients (12%), mainly due to cardiovascular and infectious complications.

**Conclusions:** Prevalence of HBV and, HCV in hemodialysis children seems low. However, the true prevalence of HBV was not identified due to the indetermination of children for the presence of HBV-DNA with a negative test for HBsAg, which needs further investigation. Implementations of strict infection-control program are highly recommended for preventing the transmission of infection in the hemodialysis units.

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