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**Demographic and clinical characteristics of children with end-stage renal disease undergoing dialysis in the West Bank, Palestine: a multicenter cross-sectional study**

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## **Abstract**

### **Background:**

Although renal replacement therapy (RRT) has been used for children with end-stage renal disease (ESRD) for many decades, there is no evidence of long-term survival in patients. Over the last decade, dialysis has improved with substantial developments in technology and clinical management. Morbidity rates decreased over the sessions, seizures were exceptional, and episodes of hypotension or headaches were rare.

**Objectives:** The purpose of this study is designed to analyze the results of children treated with dialysis at Palestinian dialysis's centres regarding prevalence, etiology, characteristics, complications, and clinical outcomes.

**Methods:** This cross-sectional study was undertaken during a certain period at all dialysis units in the West Bank and included all children with cases of ESRD on dialysis.

**Result:** Prevalence of pediatric dialysis among pediatric age groups is about 23/2500.000, the mean age of patients is 12.4, with males being 60.9% of the sample. As for their origin, 34.8% are from Nablus. Hemodialysis (HD) patients number were 11; among HD patients, 54.5% of them have Central venous catheter (CVC), and heparin use during dialysis is found in 90.9% of HD patients. During the session, 36.4% of them complained of hypotension, peritoneal dialysis (PD) patients' number was 12, and 25% of them complained of abdominal pain during the peritoneal session. Among PD patients, 8.3% transfer to peritoneal from CVC because it is cost-effective, and 45.5% of PD transfer to peritoneal from CVC because it is more comfortable. Throughout HD patients, 18.8% transfer to the shunt from CVC because it is more comfortable, and 27% transfer to the shunt from CVC because it is obstructed. Congenital nephrotic syndrome is the cause of ESRD in 30% of our sample, the diagnosis was established at infancy between (0-1) years old in 56.5%, and the mean age of onset of dialysis is ten years old. Chronic comorbidities are found in 43.5% of patients, and hospital admissions have been made to 60.9% of patients since they started dialysis. Family history of congenital kidney disease was found in 34.8% of patients, and school performance was affected in 56.5% of patients because of dialysis. The study revealed that 52% of patients' parents believe in and use alternative medicine and 50% of those patients who tried alternative medicine had improvement in their life and energy, among those who tried and believed in alternative medicine, 66% of patients had primary education and 34% of them had secondary education.

**Conclusion:** Prevalence of pediatric dialysis among pediatric age group is about 23/2500.000, the mean age of patients is 12.4, males are more than females, nearly half of them on PD, PD is more comfortable and cost-effective than HD, more than half of patients are diagnosed before two years of age, mean age of onset of dialysis is ten years old, majority of patients have comorbidities, admitted to the hospital because of dialysis complication, school performance was affected due to dialysis and ESRD, the use and believe in alternative medicine was as expected for our society and culture.

