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# EARLY COMPLICATIONS OF PERITONEAL DIALYSIS IN PEDIATRIC PATIENTS IN KAZAKHSTAN.

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**Background:** Peritoneal dialysis (PD) was successfully launched in Kazakhstan in 2009 and has been remaining the preferred method of dialysis for children with terminal chronic kidney disease in conditions when kidney transplantation cannot be performed.

**Aim:** The purpose of this study was to analyze early complications occurred after PD catheter placement in children with end-stage renal disease (ESRD).

**Methods:** Data from pediatric patients with ESRD who were admitted to National Research Center for Maternal and Child Health between November 1, 2009 and December 12, 2014 and underwent PD catheter placement were reviewed retrospectively. The incidence of early complications (including hernia, bleeding, dialysate leakage, catheter malfunction, malposition, and infection) during the first 30 days after implantation was analyzed depending on children's weight.

**Results :** Results: Forty four patients with an average age of 9.69 ± 4.68 years had 55 PD catheter placements with an open technique (47 in Group 1 with the patient weight ≥ 10kg and 8 cases in Group 2 with the patient weight < 10 kg). Although it was not statistically significant, the overall rate of early complications was higher in Group 2 than in Group 1 (18% vs. 9%). The most common complication in both groups was abdominal hernia (umbilical, inguinal and/or incisional) with a significantly higher rate in the children < 10kg (23% vs. 88%, p = 0.001). The proportion of other early complications, including postoperative bleeding and hemoperitoneum, dialysate leakage, PD catheter obstruction, PD catheter disposition, as well as infectious complications (exit site infection, tunnel infection and peritonitis) in both groups was either similar or difficult to analyze due to small number of cases (Table 1). We did not determine any correlation between the rate of the early complications and the history of the previous abdominal surgeries due to small number of observed cases.

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Conclusions : Conclusions: Children with the weight under 10 kg remain at high risk for development of abdominal hernia after the onset of PD. It is therefore appropriate to employ the surgical treatment of existed hernia or weakness of abdominal wall prior or during PD catheter insertion when feasible to minimize the rate of complications and surgical interventions in children on PD.

Keywords : children, peritoneal dialysis, complications, hernia