

Empirically Percutaneous Peritoneal Dialysis Catheter Insertion may be Reliable in a Pediatric Patient

Erim Gülcan^{1*}, Nazif Yalçın¹, Muhammed Emin Kalay¹, Özlem Kabak¹, Süreyya Özbay¹,
Özlem Özsoy², Ahmet Kapar²

¹Dumlupınar University, School of Medicine, Department of Nephrology, Kütahya, Turkey.

²Dumlupınar University, School of Medicine, Department of Pediatrics, Kütahya, Turkey.

***Corresponding Author:** Erim Gülcan, Dumlupınar University, School of Medicine, Department of Nephrology, Kütahya, Turkey, Email: drerimgulcan@gmail.com

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LETTER TO EDITOR

Peritoneal dialysis is the often preferred and more convenient method of renal replacement therapy in children with kidney failure(1,2,5). There are also indications for acute dialysis other than kidney failure one of which is treatment resistant metabolic acidosis(3,5). In this article, we discussed the efficiency and safety of acute peritoneal dialysis treatment after the insertion of percutaneous peritoneal dialysis catheter in a 7-year-old male patient with Fructose-1,6-diphosphatase deficiency.

In this report, we describe a 7-year-old male patient who is diagnosed with FBPase deficiency 8 months ago and has been monitored since. The patient was brought to pediatric emergency department complaining of nausea, vomiting and abdominal pain. He was conscious, oriented, cooperated and his vitals were stable but the physical examination showed that he had abdominal tenderness. There was no significant indication of acute abdomen in his standing direct abdominal radiograph. Laboratory investigations showed that his white blood cell count was increased to 42910 per mm³, in his blood; the levels of glucose were: 66 mg/dl, creatinine: 1.03 mg/dl, blood pH: 7.16 and HCO₃⁻:10.6mmol/L. Hospitalization had been planned and he got admitted to the department of pediatrics. The patient, who was started on NaHCO₃ treatment due to these findings, had shown gradually declining consciousness and been taken to the intensive care unit. He continued to have distorted consciousness at the first day of his admission, his arterial blood gas values were; pH: 7.26, HCO₃⁻:12.3mmol/L, lactate: 12 mmol/L, so his NaHCO₃ treatment was sustained. Despite the

maintaining of the NaHCO₃ therapy, his blood HCO₃⁻ levels dropped in the order of 9.5mmol/L and later 7.6 mmol/L. According to this development the patient was thought to have treatment resistant metabolic acidosis thus he was consulted to the nephrology department. Due to preliminary diagnosis of treatment resistant metabolic acidosis, nephrology department recommended that the patients should receive peritoneal dialysis. It had been decided for the patient to take peritoneal dialysis therefore he was to go through an PD catheter insertion process. Before the intervention, he was agitated and in a confused state of mind so he was put to sleep by intravenous diazepam injection and then the procedure of empirically percutaneous peritoneal catheter placement under local anesthesia had been successfully completed (image 1). Promptly, the patient was started on acute peritoneal dialysis treatment. After one day of administration his blood pH was 7.32, he had a HCO₃⁻ level of 16 mmol/L and he was fully recovered back to consciousness.

Recently, it is observed that there has been an increased requirement of acute dialysis in pediatric population(4). Although peritoneal dialysis is an often used dialysis modality in pediatric patients; the procedure of catheter insertion is a subject usually avoided by nephrologists and other surgeons(1). With this report, we have shown that the empirically percutaneous PD catheter placement can be safely as surgical placement in pediatric population. However, we believe repeating these experiments in larger populations would be beneficial for further evidence.

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