International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064
Index Copernicus Value (2013): 6.14 | Impact Factor (2014): 5.611

Peritoneal Dialysis Catheter Malfunction by Plastic Piece: Case Report

Mittal K[1], Mittal A[2], Sonika P[3], Aggarwal HK[4]

[1]Professor Pediatric Intensive Care Unit, Department of Pediatrics, Pt B D Sharma, PGIMS Rohtak

[2]Anatomist, Deputy Civil Surgeon, Rohtak

[3]Resident, Department of Pediatrics, Pt B D Sharma, PGIMS Rohtak

[4]Senior Professor Medicine and Nephrology, Pt B D Sharma, PGIMS Rohtak

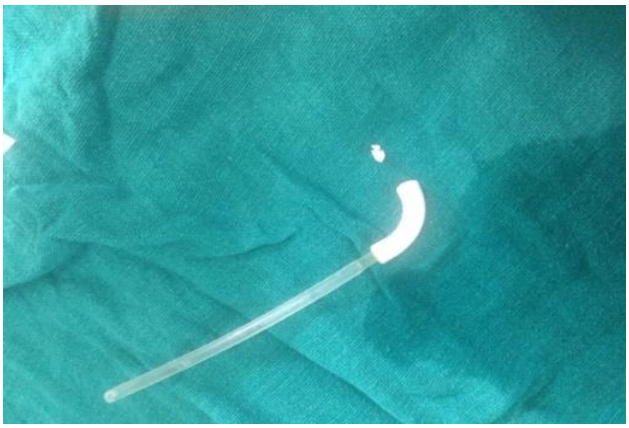
Abstract: ***Sepsis is leading cause of intensive care admission and acute kidney injury is one of serious but treatable condition with timely intervention. There are different ways to manage acute kidney injury and peritoneal dialysis is one of common procedure in children who needs dialysis. Various complications do occur with procedure and device itself. Malfunctioning of peritoneal dialysis catheter by plastic ball is rare occurrence.***

Keywords: Peritoneal dialysis, PD catheter

1. Case

Acute kidney injury is commonly encountered in pediatric intensive care units due to multiple reasons. In children peritoneal dialysis is common method of renal replacement therapy and continuous peritoneal dialysis (PD) is most commonly employed in neonates, infants and children. It has fewer complications than hemodialysis because it is being a simplerprocedure. Mechanical complications may occur during any step of procedure during PDand are common. Here, we are reporting a case of unusual blockage of PD catheter by a piece of plastic.

A 4year male child who presented to the emergency room of our department with complaint of polyuria, polydipsia, difficulty in breathing for 2 days. Blood sugar was 497mg/dl and urine was positive for ketone bodies. A diagnosis of diabetic ketoacidosis was made. The child did not pass urine for the last 24 hoursinspite of fluid therapy. Biochemical parameters started worsening inspite of adequate fluid management and blood urea and serum creatinine rose significantly.Child was put on acute kidney injury regime and peritoneal dialysis using child catheter was started. After 2 cycles of peritoneal dialysis, there was a problem in the inflow of the dialysate. Catheter manipulation was done but failed. All parts of catheter were analyzedseparately.There was a resistance on flushing the catheter. The catheter was manipulated to ensure the correct positioning of the catheter but the dialysis fluid did not go inside. When the white plastic bent part of the catheter was removed, we noticed that fluid could come out of the catheter which ruled out the possibility of blockage of catheter inside the peritoneal cavity. A sterile IV set wasconnected to the catheter and the dialysate was given. Now the inflow was proper. All the external parts were then looked for the possible obstruction. We found that a small piece of plastic rough ball detached from catheter was present in the bent part which was causing the obstruction (shown below). Subsequently it was removed and process was successfully restarted.



2. Discussion

Mechanical obstruction of the catheter usually results from misplacement at operation, omental wrapping, migration out of pelvis, adhesions or encasement by fibrin (intraluminal and extraluminal). Cases are also reported where PD catheter was blocked as a result of capture by fimbriae of fallopian tube (1-3]. In our case, catheter was blocked due to dislodgement of a piece of plastic which got entrapped in the bent connecting part. The suspicion of blockage of external parts of catheter avoided unnecessary complication of removal and re insertion of the catheter. Thus it is important to rule out the blockage of all parts of PD catheter before proceeding for other invasive manipulations and to avoid unnecessary infections and complications as was seen in present case.

References

[1] GunerOgunc. Malfunctioning peritoneal dialysis catheter and accompanying surgical pathology repaired by laparoscopic surgery. Peritoneal dialysis international 2002; 22: 454-62

[2] Hummeida MA, Khalid SE, Modawi MHA, Mobarak AI, et al. Recurrent transvaginal leak of dialysate as a complication of peritoneal dialysis catheter tip capture by

fallopian tube after tubal occlusion. Arab journal of Nephrology and Transplantation 2010; 3: 37-40.
[3] Singh S K S, Common A, Perl J. Peritoneal dialysis International: Journal of International Society for Peritoneal Dialysis 2012; 32:218-20.