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Objective: Continuous ambulatory peritoneal dialysis is an important modality of renal replacement therapy in children. Catheter dysfunction (commonly obstruction) is a major cause of morbidity and is a significant concern that hampers renal replacement therapy. As omentum is a significant cause of obstruction, some recommend routine omentectomy during insertion of the peritoneal dialysis catheter. Omentopexy rather than omentectomy has been described in adults to spare the omentum as it may be needed as a spare part in many conditions. Laparoscopic approach is commonly preferred as it provides global evaluation of the peritoneal space, proper location of the catheteral end in the pelvis and lesser morbidity due to inherent minimally invasive nature. The aim of this study is to present the technique of laparoscopic peritoneal dialysis catheter placement in children with concurrent omentopexy.

Material and method: We retrospectively evaluated our patients who underwent laparoscopic placement of peritoneal dialysis catheter with concomitant omentopexy or omentectomy.

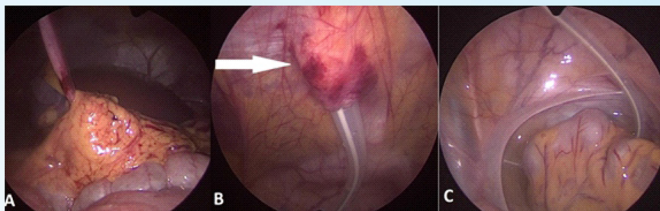


Figure 1. A) Omentum imbricated and fixed to the falciform ligament. B) Peritoneal entrance site of the catheter, white arrow indicate that second cuff is located outside the peritoneum. C) Free end of the catheter located deep in the pelvis

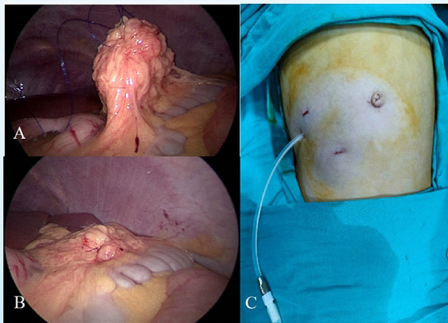


Figure 2. Omentum imbricated onto itself at the most depending site of origin around gastro-colic ligament (A and B). Final appearance (C).

Results: A total of 30 patients were enrolled who received either omentectomy (n = 18) or omentopexy (n = 12). Four catheters were lost in the omentopexy group (33%) and 3 in the omentectomy group (17%), but none were related to omental obstruction. Three out of 4 patients in the omentopexy group and 2 out of 3 patients in the omentectomy group had a previous abdominal operation as a potential cause of catheter loss. Previous history of abdominal surgery was present in 6 patients (50%) in the omentopexy group and 3 patients (17%) in the omentectomy group.

Conclusion: As omentum was associated with catheter failure, omentectomy is commonly recommended. Alternatively, omentopexy can be preferred in children to spare an organ that may potentially be necessary for many surgical reconstructive procedures in the future. Laparoscopic peritoneal dialysis catheter placement with concomitant omentopexy appears as a feasible and reproducible technique. Although the catheter loss seems to be higher in the omentopexy group, none was related with the omentopexy procedure and may be related to the higher rate of history of previous abdominal operations in this group.

Keywords: Child; Chronic kidney disease; Kidney replacement therapy; Laparoscopy; Omentopexy; Peritoneal dialysis.