



Flow problems during implantation of a peritoneal dialysis catheter: building a capnoperitoneum using the peritoneal dialysis catheter

Problemas de fluxo durante implantação de um cateter de diálise peritoneal: formação de capnoperitônio usando o cateter de diálise peritoneal

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IMAGES IN NEPHROLOGY

A peritoneal dialysis catheter (PDC) was implanted to initiate renal replacement therapy in an end-stage kidney-disease patient with chronic graft failure¹. Before

tunneling, the PDC was flushed with sodium chloride solution and aspirated without reflux. It was decided to explore the peritoneal cavity via laparoscopy², which requires the artificial filling of

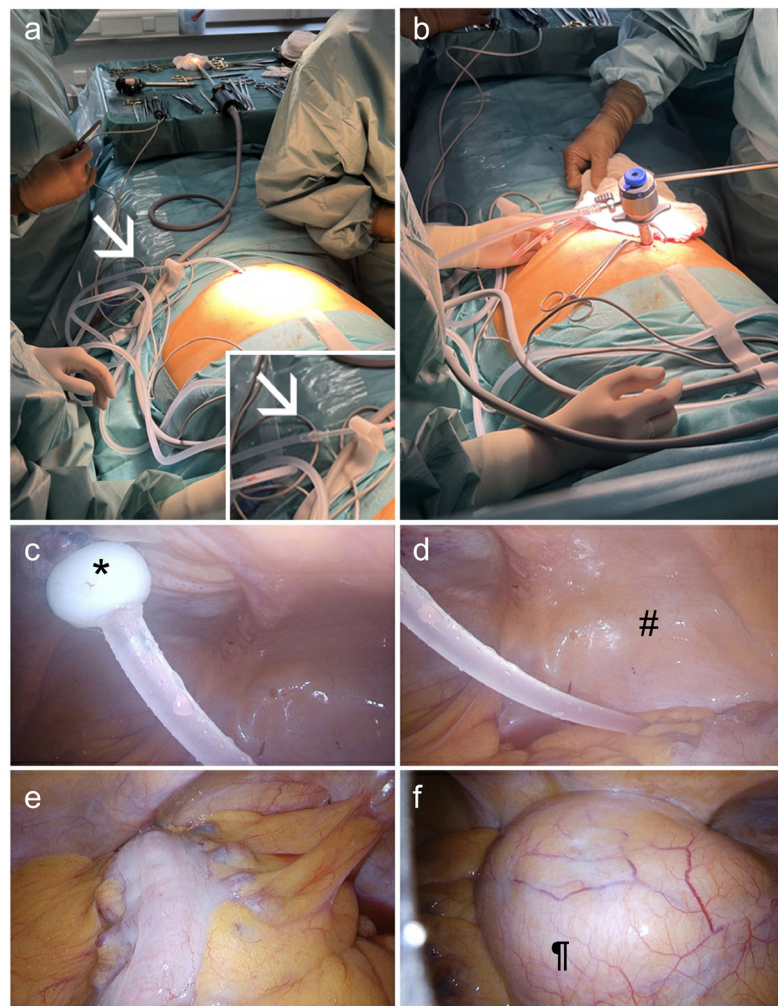


Figure 1. a. Carbon dioxide (CO₂) inflation using the peritoneal dialysis catheter. b. Established capnoperitoneum with an inserted 10 mm trocar camera. c. For this patient, we used an Oreopoulos-Zellerman peritoneal dialysis catheter equipped with a flange and bead (*) surrounding the catheter below the inner cuff. The fascia transversalis is fixed with a purse-string suture between the flange and the bead to secure a tight sealing of the peritoneal cavity³. d. Bladder (#) and the peritoneal dialysis catheter entering the cavity of the small pelvis. e. Intra-abdominal adhesions adjacent to the colon in the lower left quadrant. f. Kidney transplant in the lower right abdomen (¶).

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the peritoneal cavity with carbon dioxide (CO₂, capnoperitoneum), usually infused using a trocar with the risk of organ perforation or damage of the PDC during insertion. We found that connecting the CO₂-gas line to the PDC allows the capnoperitoneum to be performed safely and easily (Figure 1). Afterwards, an incision is made in the epigastrium and a 10-mm trocar camera is inserted. On inspection of the abdominal cavity the entrance of the PDC appears to be unobtrusive and airtight using the suture technique by Twardowski³. The PDC entered into the small pelvis, without the need for an intervention⁴. After draining the capnoperitoneum, the PDC was rinsed again with a sodium chloride solution, which drained quickly and passively. Although no other catheter had to be implanted, it cannot be affirmed that the capnoperitoneum per se solved a suspected obstructive reflux problem.

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AUTHORS' CONTRIBUTIONS

EKF, UPH and CA, were responsible for treatment decisions. CA and EKF wrote the first draft of the manuscript. All authors participated in revising the manuscript and approved the final manuscript for publication.

CONFLICT OF INTEREST

The authors declare no competing interests.

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