



Computed tomography peritoneography to explore peritoneal dialysis dysfunction: a Nephrology picture

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An 80-year-old woman with chronic kidney disease related to hypertension started peritoneal dialysis (PD) after percutaneous insertion of a PD catheter.

Due to slow outflow of PD fluid and poor ultrafiltration, kidney, ureter and bladder x-rays and bladder scan were performed, which did not identify the cause of the PD dysfunction.

Computed tomography (CT) peritoneography was then performed, which associates peritoneal infusion of a mixture of iodine contrast media and dialysate, followed by CT of the abdomen and pelvis. Heterogeneous distribution of the contrast media/dialysate fluid was observed, with abnormally low opacification of the right part of the peritoneal

cavities due to bowel dilatation above fecal impaction, related to severe constipation (Figure A–C). CT peritoneography excluded malposition of the PD catheter, kinking or breaking, as well as abnormal leakage or hernia (Fig. 1D). Intensive constipation treatment with polyethylene glycol allowed solving the problem.

In case of outflow PD catheter dysfunction, a diagnostic sequence includes prevention and treatment of constipation, kidney, ureter and bladder x-rays and bladder scan [1]. In difficult cases, CT peritoneography may be very helpful to diagnose catheter-related problems (tunnel leak, malposition, kink), hernias, as well as peritoneal space anomalies such as adhesions or loculated fluid collection which are

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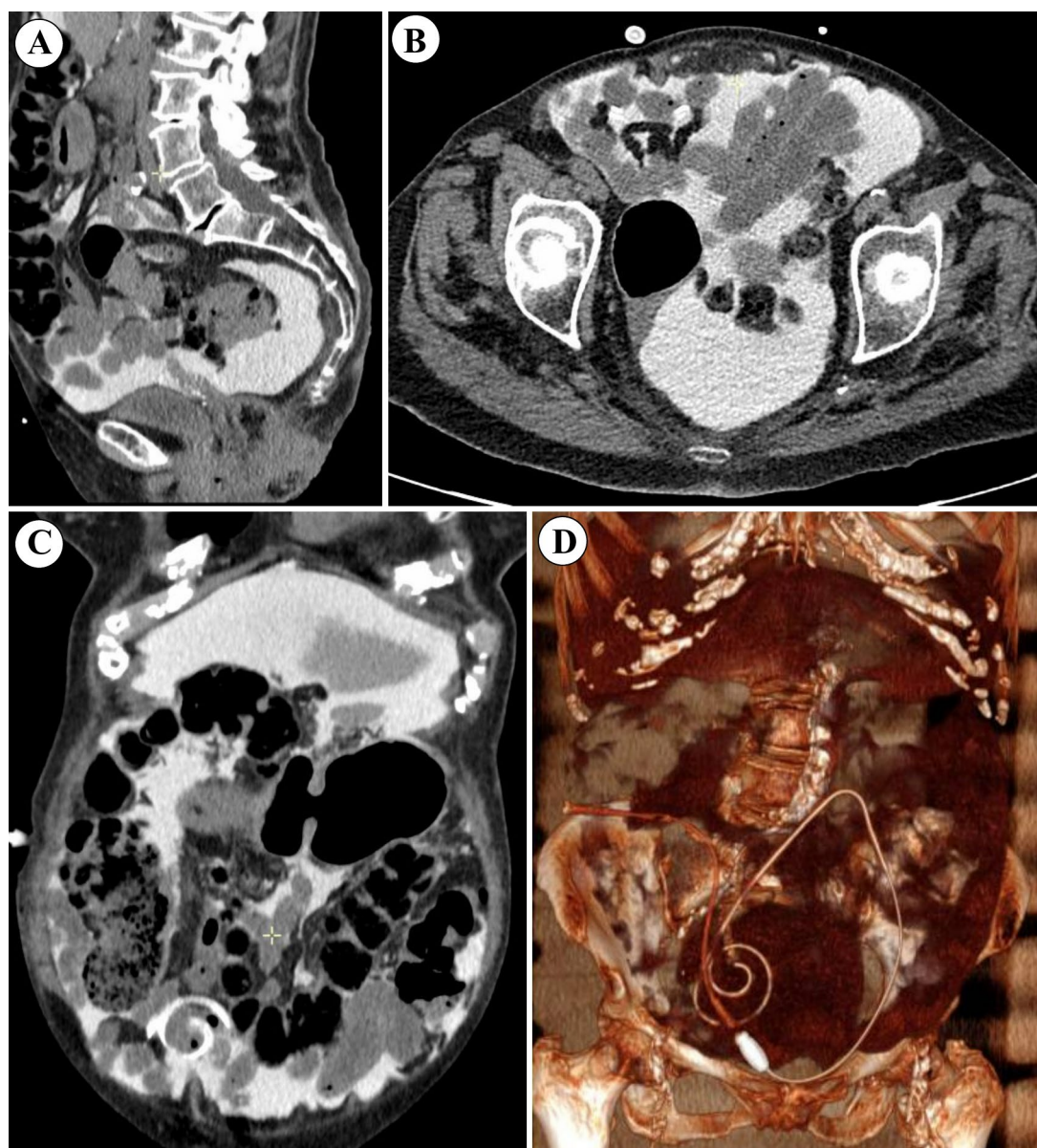


Fig. 1 CT peritoneography | **A** Sagittal section after intraperitoneal infusion of contrast media/dialysate mixture via the PD catheter **B** Transversal view, pelvis **C** Coronal view: abnormally low diffusion of the fluid mixture in the right part of the abdomen adjacent to bowel

dilatation with fecal impaction **D** 3D reconstruction showing normal structure and location of PD catheter in the peritoneal cavities with the tip located in the deep pelvis. *CT* Computed tomography, *PD* peritoneal dialysis

suspected in the presence of heterogeneous diffusion of the PD fluid [2].

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Data availability Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

Declarations

Conflict of interest All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

Ethical approval Cliniques universitaires Saint-Luc does not require ethical approval for reporting individual cases or case series.

Informed consent to publish Written informed consent was obtained from the patient for their anonymized information to be published in this article.

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