Soft-tissue infiltration in a peritoneal dialysis patient

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Figure 1 | Large and diffuse swelling in the right hemiabdomen.

A 44-year-old woman on peritoneal dialysis for 4 months for end-stage kidney disease secondary to systemic lupus erythematosus resistant to glucocorticoid and immunosuppressive agents presented with a major painful mass in the right abdomen.

The day before presentation, she started to feel some discrete swelling in the right flank, which progressively increased in size and became painful in parallel with the peritoneal dialysis exchanges. She also noticed a significant reduction in the peritoneal dialysis effluent volumes and a shortness of breath. She was afebrile. Clinical examination disclosed a large and diffuse mass in the right hemiabdomen with dullness at percussion (Figure 1; Supplementary Figure S1). Blood tests showed no acute phase response. Computed tomography scan with i.p. contrast injection of 75 ml of iobitridol (Xenetix [Guerbet; Roissy, France]) found dialysate leakage through a right peritoneal breach (5×5 mm) with extensive infiltration of pre-peritoneal soft tissues (Figure 2; Supplementary Figure S2). The mass resolved



Figure 2 | Computed tomography scan after i.p. instillation of contrast material shows soft-tissue infiltration of peritoneal fluid (red arrow) through peritoneal leak (dark arrow), at a distance from the peritoneal catheter (white arrows).

progressively after peritoneal fluid drainage and the transfer of the patient to hemodialysis. No surgical repair was proposed. This dialysate fluid leakage is best explained by a breach within a weakened abdominal wall favored by the laparoscopy trocar used during catheter implantation.

Fluid leaks are common noninfectious complications of peritoneal dialysis but rarely manifest as infiltration of soft tissue secondary to peritoneal breach. Computed tomography scanning after i.p. instillation of contrast dye product documents both the leak size and localization. Unless surgical repair may be proposed, patients require permanent transfer to hemodialysis.

SUPPLEMENTARY MATERIAL

Supplementary File (PDF)

Figure S1. Three-dimensional computed tomography soft-tissue reconstruction shows large and diffuse infiltration of the right hemiabdomen.

Figure S2. Computed tomography scan after i.p. instillation of contrast material shows major pre-peritoneal soft-tissue infiltration of peritoneal fluid (red arrow).