Unusual Dialysate Leakage Complicating Peritoneal Dialysis

A 16 years female who had end-stage renal disease on 2-month continuous ambulatory peritoneal dialysis (CAPD) presented with perineal pain 4 days before admission. The physical examination revealed bilateral labial edema. Peritoneal scintigraphy was requested after infusing 2 L peritoneal dialysate with direct administration of 370 MBq (10mCi) technetium-99m diethylenetriamine pentra-acetic acid into peritoneal cavity via Tenckhoff catheter. Radioactive uptake from right inguinal to labial region was clearly demonstrated, and this indicated the site of peritoneal leakage (Fig. 1). After surgical intervention unilaterally, she continued CAPD without any recurrence.

Genital edema is one of known complications of CAPD. However, dialysate leak unilaterally into a labium major is rarely reported. The cause is usually a peritoneal membrane defect along the CAPD catheter tract or an underlying hernia with a patent processus vaginalis. Clinically, bilateral scrotal swellings in the male and labial edema in the female are usually discovered by bilateral leakage, but leakage rarely occurs unilaterally, as in this patient. Although leakage through a unilateral inguinal hernia has been detected in male patients using radionuclide scintigraphy, this is a rare depiction in a female patient. Herein, we highlight that non-invasive radionuclide scintigraphy is an excellent, rapid tool to reveal the dynamic distribution of dialysate within the peritoneal cavity and locate the leakage site easily to avoid bilateral surgical exploration.

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