“Self-Locating” Peritoneal Catheter Displaced into an Inguinal Hernia

KEYWORDS: Self-locating catheter; displacement; inguinal hernia.

Many variations of the classic Tenckhoff peritoneal dialysis (PD) catheter have been designed to avoid the displacement of the tip from the correct position into the true pelvis. We report the case of a patient with displacement of his “self-locating” catheter tip into a right inguinal hernia and its spontaneous repositioning at the rectovesical space later.

CASE REPORT

Our patient is a 48-year-old male (body mass index: 25.5 kg/m²) with a lung-heart transplantation 10 years previous and end-stage renal disease secondary to calcineurin inhibitors nephrotoxicity. He underwent insertion of a “self-locating” peritoneal catheter (containing 2 cuffs and a 163-mm-long intraperitoneal portion) using infraumbilical minilaparotomy. Immediate postoperative abdominal radiography confirmed the appropriate placement of the catheter. One month later, the patient began automated nocturnal intermittent peritoneal dialysis (ANIPD) without daytime dialysate dwell. Five months after starting ANIPD, the patient presented progressive right inguinal swelling. Computed tomographic (CT) peritoneography shows an uncomplicated right indirect inguinal hernia, which contains the tip of the “self-locating” catheter, without leakage signs (Figure 1). One day later, physical examination and abdominal radiography showed that the terminal end of the catheter had returned to the rectovesical bottom without specific maneuvers or laxatives. Peritoneal dialysis (PD) was suspended temporarily and the inguinal hernia repaired through open surgery, without surgical manipulation of the catheter, which remained well-positioned and functional.

DISCUSSION

Malposition of the peritoneal catheter tip may occur in 12.7%–35% of patients (1). It can be produced by peritoneal adhesions, omental attachment, intestinal peristalsis or physical characteristics of the catheter (2). This complication may result in PD failure.

The “self-locating” catheter designed by Di Paolo *et al.* incorporates 12-g tungsten cylinder coated in “silastic” at the distal end, which helps keep it downward into the Douglas

Figure 1 — CT peritoneography (A: coronal reconstruction, B: volume rendering reconstruction) shows dialysis liquid contrasted with iodine filling the peritoneal cavity. Peritoneum herniation through right inguinal canal (discontinuous arrow) forms a clear-cut sac (long arrow) which contains contrast media and the “self-locating” catheter tip (short arrow). Urinary bladder (asterisk) appears enhanced due to renal excretion of iodine.

pouch and prevents its excessive mobility, especially when the patient is erect (3).

Conservative methods have been described for catheter reorientation. However, in some cases surgical revision is necessary, by laparoscopy or minilaparotomy preferably, minimizing the laparotomy complications and peritoneal compromise (2). In our case, CT peritoneography was required to distinguish between hernia and leakage, which was imperative in deciding on the treatment (2).

DISCLOSURES

The authors have no financial conflicts of interest to declare.

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