CORRESPONDENCE

Importance of Neurogenic Bladder as a Cause of Drainage Failure

Editor:

Drainage failure is one of the peritoneal dialysis (PD) catheter-related problems that cause morbidity and greatly reduce quality of life (1). We report here 2 cases of outflow failure due to neurogenic bladder.

The first case was a 62-year-old female with diabetic nephropathy. Peritoneal dialysis was initiated 4 years prior, and 1 year later, hemodialysis (HD) was combined with PD. She developed outflow failure, but X rays showed no signs of catheter malposition. Suction and injection of fibrinolytic agent had no effect. A plain computed tomography (CT) scan revealed the tip of the catheter pressed against the abdominal wall by a dilated bladder containing a large amount of urine (Figure 1), despite the fact that she had been considered to be anuric for several years. Approximately 1 L of urine was drained by urethral catheterization, and outflow failure was completely resolved.

The second case was a 79-year-old male with diabetic nephropathy with a 3-year history of PD, and 8-month history of bimodal therapy with PD and HD. He experienced sudden outflow failure, but X rays, intraluminal suction or injection,

and intraluminal fibroscopy were performed without effect. He continued to void 100–300 mL of urine per day, but a plain CT scan showed an extended urinary bladder wall and considerable remaining urine, which pushed the tip of the catheter into the rectum (Figure 1). After urethral catheterization, approximately 500 mL of urine flowed out and drainage from the catheter improved dramatically.

Major causes of outflow failure include malposition of the catheter tip, catheter omental wrap, and catheter obstruction by luminal plug (2–4); and X rays, catheterogram, suction or injection of a fibrinolytic agent, and intraluminal fibroscopy are used to diagnose it (2–5). However, a plain CT scan was critical to diagnose such a case. Moreover, treatment was quite easy with urethral catheterization, while some catheter malfunctions require surgical intervention.

An important lesson here is that, even if patients are considered to be anuric or oliguric, they may have urine remaining in the bladder, and urinary bladder dilatation should be suspected as a cause of drainage failure.

DISCLOSURES

The authors have no financial conflicts of interest to declare.

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Figure 1 — Plain abdominal CT taken when drainage failure occurred. (A) transverse view of first case, (B) transverse view of second case, (C) sagittal view of first case, (D) sagittal view of second case. In both cases, extended urinary bladder wall pushed the tip of the catheter against the abdominal wall.

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