Dysfunctional bladder catheter: catheter balloon inflated in a small bladder diverticulum

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DESCRIPTION

A 72-year-old man was admitted to the emergency department due to fever and cough. Nine days prior he had had an open cholecystectomy performed due to acute cholecystitis. Biochemical analysis showed leucocytosis ($15 \times 10^9/L$); all other parameters were normal. Chest X-ray showed bilateral pneumonia, and treatment with intravenous isotonic saline and antibiotics was initiated. A bladder catheter was placed to monitor the effect of fluid resuscitation. The catheter only produced 150 mL of urine within the first few minutes. Since the catheter produced urine shortly after being placed it was presumed as being placed correctly. Urine was tested (chemical stix test) and showed minor microscopic haematuria without signs of infection.

Within a couple of hours after urinary catheter placement, the patient developed acute abdominal pain. Cholecystectomy complications were suspected and an abdominal CT scan was subsequently performed. The CT revealed a massively distended bladder with the urinary catheter balloon inflated inside a bladder diverticulum (figure 1).

The bladder catheter balloon was deflated and withdrawn from the bladder diverticulum resulting in momentary drainage of 2 L urine, and the patient's abdominal pain disappeared. Eight days after admission, the patient had recovered and was discharged from hospital.

Solitary vesical diverticulum located at the bladder top is rare and can easily be mistaken for a urachal remnant.¹ One other case report has been published regarding this subject.²

Learning points

- ▶ Misplacement of the catheter should always be considered in patients with a bladder catheter and limited urine production.
- ▶ Clinical reassessment of the patient and ultrasonography can be used as simple, radiation-free tools to measure bladder volume and assess urinary catheter placement.
- ▶ Take home message is do simple things first and avoid arranging CT in a rush.

Figure 1 Abdominal CT scan with intravenous contrast was performed (A) 9 days prior to the bladder catheter placement and (B) 8 h after the placement of the bladder catheter. Arrow showing the small bladder diverticulum in the cranial and anterior part of the bladder. The arrowhead showing the inflated catheter balloon placed in the bladder diverticulum. Diverticulum located at the bladder top could easily be mistaken for a urachal remnant.

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