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Gallbladder visualisation after intravenous urography

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DESCRIPTION

A 42-year-old man presented to the Emergency Department with a sudden onset of right renal colic. Physical examination showed knocking tenderness on the right-sided costovertebral angle. Laboratory evaluation was unremarkable except haematuria on urinalysis. Abdominal radiography of the kidneys, ureters, and bladder (KUB) was negative. Intravenous urography, using 50 ml of 76% amidotrizoate as a bolus, demonstrated right-sided obstructive uropathy (figure 1). Immediate ureteroscopy revealed a calculus impacted in the lower third of the right ureter. Lithotripsy with a double J stenting was performed. A postoperative KUB scan showed a tobacco-pipe-shaped accumulation of contrast medium in the right upper quadrant (figure 2), which was initially misidentified as an extravasation of contrast medium into the bowel. Non-enhanced CT revealed contrast medium totally collected

within the gallbladder without extravasation (figure 3). The patient recovered uneventfully and a KUB scan showed complete resolution of previously enhanced gallbladder on postoperative day 2. The patient was free of obstructive uropathy or gallbladder illness during the 12-month follow-up period.

In the face of acute unilateral obstructive uropathy¹ or chronic renal failure,² the gallbladder is able to excrete iodinated contrast media, referred to as 'vicarious excretion', resulting in enhancement of the gallbladder on KUB scan or CT 4.5–95 h after intravenous injection of iodinated contrast media.¹ Doctors should take a careful look at the opacification on right upper abdomen during abdominal radiographic or tomographic evaluation in cases with recent injection of contrast media and be aware that vicarious excretion of contrast media should be distinguished from extravasation or leakage from the urinary tract.

Figure 1 Intravenous urography showing markedly delayed visualisation of right collecting system, compatible with right-sided obstructive uropathy.

Figure 2 Postoperative abdominal radiography 20 h after intravenous injection of contrast medium showing tobacco-pipe-shaped accumulation of contrast medium in the right upper quadrant, consistent with enhancement of the gallbladder, and a double J stenting in the right ureter.

Competing interests None.

Patient consent Obtained.

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Figure 3 Non-enhanced CT (axial view (A) and coronal view (B)) showing high-density contrast medium collection within the distended gallbladder without extravasation.

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