Eight-year-old boy presenting with abdominal distention after blunt trauma in Liberia

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Accepted 26 February 2016

DESCRIPTION

An 8-year-old boy presented with abdominal distention 1 week after a wall collapsed on him. Immediately after the injury, he developed abdominal distention. He was treated at an outside hospital and observed overnight. No imaging was available and he was discharged home the following day. His abdominal distention recurred the next day. He presented to another outside hospital and was referred to our institution.

Examination was remarkable for abdominal tenderness and distention with neither guarding nor rebound. Ultrasound showed free peritoneal fluid. The differential diagnosis included uroperitoneum, haemoperitoneum, faecal contents due to viscous injury and ascites unrelated to trauma. A bladder catheter was placed and drained 2500 mL of yellow fluid. Repeat ultrasound showed decreased ascites and the appearance of the catheter outside the bladder (figure 1), supporting the diagnosis of an intraperitoneal bladder rupture.

Intraoperatively, a bladder laceration was identified and repaired (figure 2). The catheter was maintained for 19 days. The patient was discharged home after successful voiding trials. The bladder is an intra-abdominal organ in children and at higher risk for injury than in adults, where it is protected by the pelvis.¹ Intraperitoneal bladder ruptures occur when a blunt force to the abdomen causes increased intravesicular pressure and bladder dome rupture.² Static or CT cystograms are indicated when lower genitourinary trauma is suspected.² These are often unavailable in limited-resource settings. Case reports exist documenting recognition of bladder rupture on ultrasound.³ Although ultrasound is neither as sensitive nor as specific a test, it may play an important role in evaluating such patients in limited-resource settings.

Figure 1 Ultrasound image demonstrating the bladder catheter outside the bladder wall.

Figure 2 Intraoperative image of intraperitoneal bladder rupture with the catheter outside of the bladder wall.

Learning points

- ▶ Genitourinary injury should be considered in the setting of blunt trauma.
- ▶ Static or CT cystograms are indicated when lower genitourinary trauma is suspected.
- ▶ Ultrasound may play an important role in genitourinary trauma evaluation if other tests are not available.

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Contributors AMV, AFC and PCH had the idea for the article. AMV, AFC and SAK performed the literature search. All authors have contributed in writing and editing the article. PCH is the guarantor.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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To cite: Vinograd AM, Camara AF, Konneh SA, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-214372

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