Advantages of bedside ultrasound in the emergency department

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DESCRIPTION

An 18-year-old girl presented to the emergency department with a 2-day history of right iliac fossa pain and vomiting. She reported difficulty in passing urine for 24 h. Her medical history included hypothyroidism.

On abdominal examination, the patient was found to be tender in the right iliac fossa with a palpable bladder. The patient was unable to provide a urine sample and was subsequently catheterised with 50 ml residual urine. Urinalysis demonstrated ketones 80 mg/dl, protein 30 mg/dl and a trace of blood. Urine β -human chorionic gonadotropin hormone was negative.

A decision was made to re-catheterise the patient with ultrasound being performed during catheterisation. A catheter tip was identified within the empty bladder, and a large fluid-filled cyst was noted to compress the bladder (figure 1). A provisional diagnosis of a large ovarian mass was made, and the patient was transferred to the gynaecology team for further management. A CT scan of the abdomen and pelvis was performed which demonstrated a large ovoid haemorrhagic ovarian cyst measuring 13×9×16 cm (figure 2). Subsequently, the patient had laparotomy and right oophorectomy. Although the CT scan had queried adenoma or carcinoma, the histopathology report did not show any evidence of malignancy.

Figure 2 CT scan demonstrating a large ovarian cyst.

Learning point

- Ultrasound is the gold standard for diagnosis of ovarian cysts.¹ This case demonstrates that the appropriate use of simple bedside ultrasound in the emergency department can aid a patient's diagnosis and appropriate management.

Figure 1 Ultrasound image demonstrating a urinary catheter tip (arrow) in the bladder.

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