Large air–fluid level in the perinephric space without obstruction

Manish Garg, Manoj Kumar, Kuldeep Sharma, Satyanarayan Sankhwar

DESCRIPTION
A 50-year-old woman presented to the urology department with a 20-day history of right flank pain, tenderness and high-grade fever with uncontrolled diabetes. The patient had diabetes for the past 5 years and was on oral hypoglycaemic drugs. On initial evaluation with ultrasound, large perinephric collection with right inferior calyceal calculus was found. Contrast-enhanced CT was suggestive of large perinephric collection with air and debris and inferior calyceal stone diagnostic of right emphysematous pyelonephritis (EPN) (figure 1).

Large collection was admixed of liquefied necrotic material which was settled at the bottom of the perinephric space with air above giving rise to renal air–fluid level simulating abdominal air–fluid levels, typically seen in conditions of intestinal obstruction (figures 2 and 3). The patient was managed aggressively by control of blood sugar levels and insertion of pigtail catheter in the perinephric space. Urine culture was suggestive of Klebsiella and organism-sensitive antibiotics were started accordingly. After complete resolution of collection and once the general condition of the patient stabilised, renal calculus was removed by percutaneous nephrolithotomy in the next admission. The patient was asymptomatic in the follow-up period.

EPN is a severe necrotising renal infection, with characteristic gas formation within or around the kidneys. The condition most commonly occurs in women with diabetes.1

Learning points
▸ Emphysematous pyelonephritis is a morbid condition and may lead to fulminant sepsis and high mortality.
▸ The condition requires aggressive management.
▸ Every attempt must be performed to salvage the kidney although nephrectomy may be required in some cases.

Competing interests None.
Patient consent Obtained.
Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCE