

Emphysematous pyelonephritis

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A 58-year-old woman with diabetes mellitus presented to the emergency department with fever and dysuria. Laboratory results showed elevations of the white blood cell count, creatinine, and the CRP, as well as a thrombocytopenia. An abdominal radiograph showed air in the left kidney (Fig. 1). A non-contrast computed tomography (CT scan) revealed swelling of the left kidney with air in the left perirenal space consistent with emphysematous pyelonephritis. The patient was treated with antibiotics, but required a left radical nephrectomy. The pathology showed renal emphysematous changes and papillary necrosis with tubular destruction. Urine and wound cultures revealed *Citrobacter diversus* and *Enterococcus* species.

Emphysematous pyelonephritis is a severe necrotizing infection of the renal parenchyma and perirenal tissues that is life-threatening, and requires aggressive diagnosis and treatment [1]. The CT scan is the best imaging modality for



Fig. 1 Abdominal radiograph showing an enlarged left kidney with air (arrows) in the surrounding tissues

early diagnosis. The most common pathogens include *E. coli* and other gram-negative bacilli, although gram-positive and polymicrobial infections have been reported [2, 3]. The majority of patients are diabetic [4]. Management options include antimicrobials, percutaneous drainage, and often nephrectomy [5].

Conflict of interest None.

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