

## Gas in the Renal Area Emphysematous Pyelonephritis

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A 37-year-old diabetic woman presented to the emergency department with a week's history of high fever, abdominal pain, and vomiting. She was febrile, tachypneic, tachycardic, and hypotensive.

Her laboratory investigations revealed a total lymphocyte count of 6000/cu mm, with 6% band forms and 87% neutrophils. Her platelet count and creatinine level were 15 000/cu mm and 2.6 mg/dL, respectively. Her blood and urine cultures were positive for *Escherichia coli*.

Arterial blood gas revealed metabolic acidosis. Plain x-ray of the abdomen showed a reniform shaped presence of air in the right renal area. A diagnosis of emphysematous pyelonephritis was made based on the classical presence of air within the kidney.

She underwent initial hemodynamic stabilization and a bedside placement of a percutaneous nephrostomy along with culture-specific parenteral antibiotics. With the above conservative measures, she dramatically improved and had a normal creatinine (1.1 mg/dL) ten days later at discharge.

The treatment of emphysematous pyelonephritis has undergone a paradigm shift, from nephrectomy to percutaneous drainage and antibiotics. There are a number of studies which substantiate that even in the more serious forms (viz., Class 3/4), percutaneous drainage along with appropriate parenteral antibiotics are sufficient.<sup>(1)</sup> Predictors of mortality in this disease are thrombocytopenia, shock, altered sensorium, and ongoing need for dialysis.<sup>(2)</sup>



Although our patient had two of the four poor prognostic factors at presentation, she improved remarkably with bedside drainage, highlighting the importance of early diagnosis and prompt treatment. This image stresses the need to aggressively investigate the unresolved case of an acute abdomen.

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