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IMAGES IN EMERGENCY MEDICINE

Outlined psoas muscle shadow

Shih-Hung Tsai, Shi-Jye Chu

A 54-year-old man presented with low back discomfort, weakness and fever (38.2°C). He had a history of alcohol-related cirrhosis of the liver and poorly controlled type 2 diabetes mellitus. A plain abdominal radiograph showed a crescentic collection of air surrounding the right renal fossa, air in the urinary bladder, and the psoas muscles clearly outlined by the free retroperitoneal air (fig 1, arrows). Subsequent unenhanced computed tomography of the abdomen confirmed the diagnosis of emphysematous pyelonephritis (EPN) as well as massive gas in the bilateral retroperitoneal space and pelvis. He was treated conservatively with intravenous meropenem and percutaneous drainage. Cultures of blood and urine grew *Klebsiella pneumoniae*. The patient recovered uneventfully and was discharged on the 17th day after admission.

EPN represents a severe life-threatening infection of renal parenchyma

Figure 1 Plain abdominal radiograph showing a crescentic collection of air surrounding the right renal fossa, air in the urinary bladder, and the psoas muscles clearly outlined by the free retroperitoneal air (arrows).

with gas-forming bacteria.¹ Optimal treatments for EPN are controversial, but patients with a fulminant clinical course, unsuccessful drainage, or failed conservative therapy should undergo nephrectomy promptly to avoid a catastrophic outcome.

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