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Gas in the kidney, Ureter, and Bladder in a Newly Diagnosed Diabetes

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Text

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Key words: bilateral emphysematous pyelonephritis, emphysematous ureteritis, emphysematous cystitis, newly diagnosed diabetes

A previously healthy 67-year-old man presented with intermittent vomiting for 1 day. Physical examination revealed left flank knocking pain. Laboratory data showed white blood count 22600/ μ l, C-reactive protein 37.4 mg/dl and blood glucose 690 mg/dl. Abdominal radiography showed air in both renal parenchyma, outlining the left kidney, in the right ureter, and around the bladder (Picture 1). Abdominal computed tomography demonstrated air collections in the bilateral renal parenchyma (Picture 2) and air within the urinary bladder lumen (Figures 3). Bilateral emphysematous pyelonephritis (EPN), ureteritis and emphysematous cystitis (EC) were diagnosed on the basis of radiologic characteristics. Blood culture grew *Klebsiella pneumoniae*. After treatment with antibiotics, bilateral percutaneous drainage (PCD), and insulin. He had an uneventful recovery.

Emphysematous urinary tract infection is a rare life-threatening infection with unique presentation of air production within the kidney, ureter, or bladder. It occurs more frequently in diabetic patients. EPN is usually unilateral. Concomitant bilateral EPN with ureteritis and EC are very rare presentations. Mortality reportedly occurs in 50% of bilateral EPN¹, so early detection and appropriate therapies are essential. It has been suggested that bilateral PCD be attempted first. If clinical response is poor, bilateral nephrectomy should be performed².

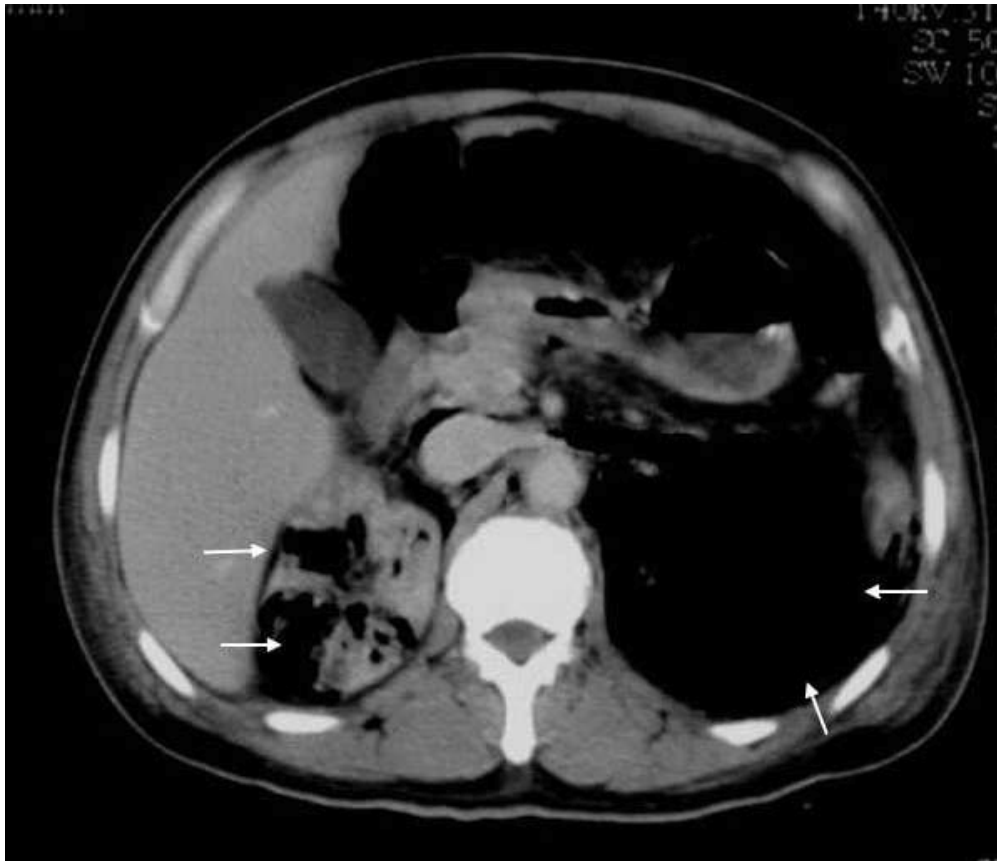
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Picture 1



Picture 2



Picture 3



