Intensive Care Med
DOI 10.1007/s00134-016-4345-0

IMAGING IN INTENSIVE CARE MEDICINE

Fatal calyceal-venous fistula

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A 32-year-old woman was admitted to the intensive care unit with chills and profound hypotension after an attempt was made to dilate a renal transplant ureteral obstruction through an existing percutaneous nephrostomy (PCN). Although she received prophylaxis for urinary colonization with *Escherichia coli*, the patient developed a refractory septic shock. Despite adequate fluid resuscitation and broad-spectrum antibiotics, she died 5 h after admission. The pyelography shows a calyceal-venous fistula (Fig. 1). When a PCN is placed in an obstructed calyceal system, urine drains until a pressure equilibrium is reached. Hematuria is expected when the pressure in the iliac vein exceeds the renal pelvis pressure. However, the opposite occurred when injecting contrast agent through the PCN during pyelography. Urine in the enclosed renal pelvis was displaced which forced urine contaminated with antibiotic-induced endotoxin through the calyceal-venous fistula into the systemic circulation causing hemodynamic collapse and subsequent cardiac arrest.

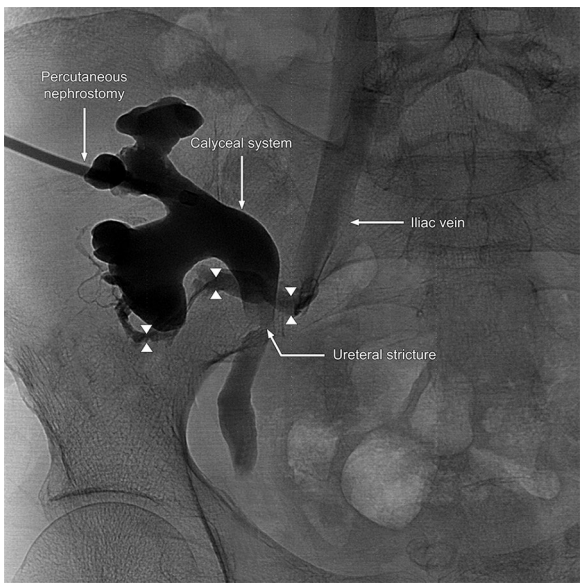

Fig. 1 Pyelogram shows a calyceal-venous fistula (*white arrowheads*)

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Received: 24 March 2016 Accepted: 28 March 2016
Published online: 15 April 2016

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