



Urinoma From Surgical Cyst Rupture and Page Kidney Phenomenon in a Kidney Transplant Recipient

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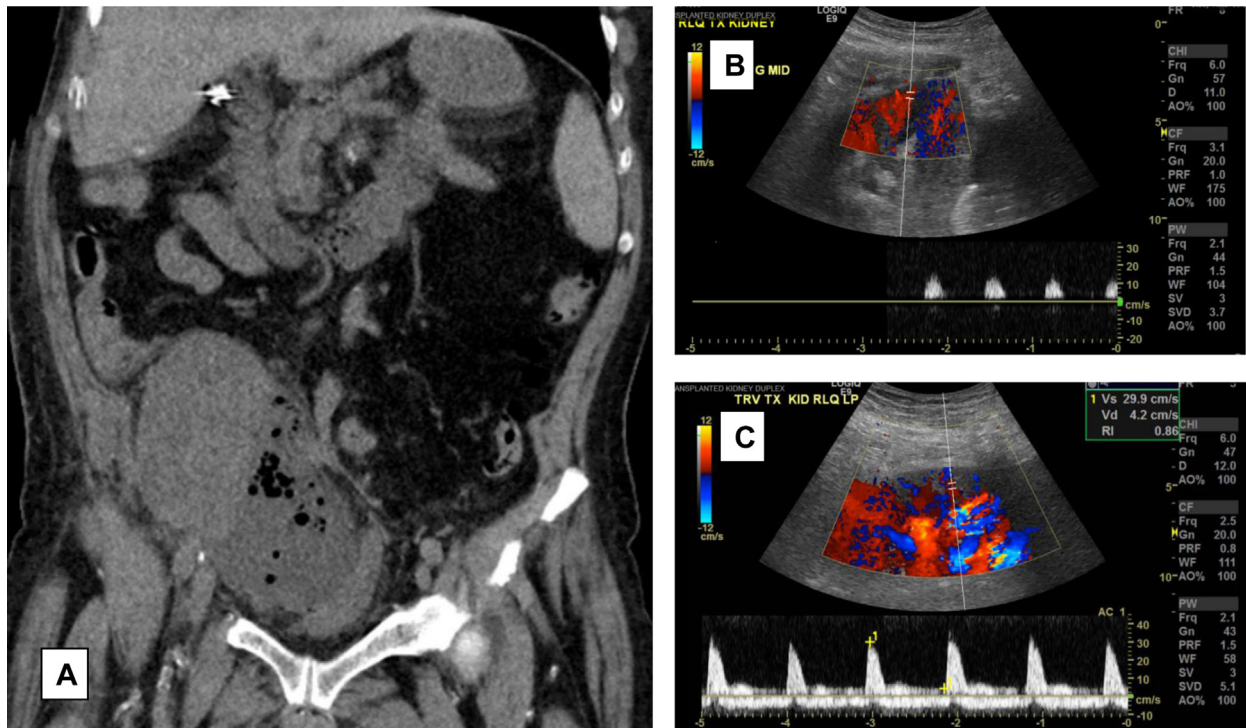


Figure 1. (A) Noncontrast computed tomography of the abdomen and pelvis shows 14 cm of peritransplant subcapsular fluid and gas collection with local mass effect. (B) Renal duplex ultrasound before drain of the subcapsular collection reveals minimal perfusion in the mid and upper poles with no end-diastolic flow. (C) Renal duplex following drain of the subcapsular collection shows blood flow. Color Doppler shows arterial flow in red (flow toward transducer) and venous flow in blue (away from transducer). Different shades of red and blue depict different flow rates.

A man in his early 60s with a deceased donor kidney transplant presented with confusion and oliguria. His transplant ureteral stent was removed 1 week earlier and a cyst on the donor kidney was marsupialized at transplantation 1 month before presentation. On presentation, his blood pressure was 114/57 mm Hg and serum creatinine level was 4.57 mg/dL (baseline, 0.67 mg/dL). Computed tomography showed 14 cm of subcapsular fluid and gas collection of the transplant kidney (Fig 1A). Renal duplex revealed minimal perfusion with periods of no end-diastolic flow in the middle and upper pole (Fig 1B), concerning for Page kidney. A percutaneous drain was placed (fluid creatinine, 38 mg/dL). Fluid, urine, and blood cultures grew *Enterobacter cloacae*. Repeat renal duplex showed improved perfusion (Fig 1C). The drain continued to have copious output (0.5–1 L/d). A percutaneous nephrostomy (PCN) tube was placed to address potential

ureteral obstruction. He was discharged at day 7 with serum creatinine level of 1.6 mg/dL. A PCN clamping trial at week 6 was unsuccessful, with an elevated serum creatinine level; therefore, PCN was converted to percutaneous nephroureterostent (PCNU). He accidentally displaced the drain at week 8 (output, <35 mL/d). Repeat images showed no re-collection of urinoma. PCNU was converted back to PCN and removed at week 19.

Page kidney is caused by compression of the organ leading to compromised perfusion and usually presents with hypertension. Most Page kidney cases in transplantation are due to hematoma from biopsy, surgery, or trauma.^{1–3} Our patient developed severe external compression of the allograft, leading to loss of diastolic flow due to a urinoma in the setting of cyst marsupialization and after stent removal. The absence of hypertension in our case was interesting whereas it could represent sepsis or lack of innervation of the

transplant kidney. The patient was treated with drain of urinoma and PCN/PCNU placement.

Image caption: (A) Noncontrast computed tomography of the abdomen and pelvis shows 14 cm of peritransplant subscapular fluid and gas collection with local mass effect. (B) Renal duplex ultrasound before drain of the subcapsular collection reveals minimal perfusion in the mid and upper poles with no end-diastolic flow. (C) Renal duplex following drain of the subcapsular collection shows blood flow. Color Doppler shows arterial flow in red (flow toward transducer) and venous flow in blue (away from transducer). Different shades of red and blue depict different flow rates.

ARTICLE INFORMATION

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