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Extraperitoneal urine leak without oliguria after renal transplantation

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Case Study: A 53-year-old male underwent deceased-donor kidney transplantation because of end-stage renal disease due to chronic glomerulonephritis. The early postoperative course was good. His creatinine level decreased to 1.72 mg/dL. However, on postoperative 10 days, he presented with sudden scrotal swelling. Urine output was maintained well over 5L. On ultrasound examination showed the normal looking kidney, no evidence of hydronephrosis and right pelvic area scanty fluid collection. His creatinine level was 1.93 mg/dL. On the next day, the patient underwent Tc-99m MAG3 renal scintigraphy and SPECT/CT imaging. Tc-99m MAG3 renal scintigraphy showed the 35-40 minute image irregular focal increased uptake on Bladder right side and after 120 minutes, heterogeneous mild uptake along the right pelvic cavity and right scrotum. SPECT/CT fusion image revealed radioactivity was observed along the transplanted kidney anterior aspect, right external iliac space, right inguinal space and right scrotum. A ureteral stent and a foley catheter were inserted after confirming that the urethral leakage site was a ureteral-cystic junction. Since then, scrotal swelling had improved, His creatinine level decreased to 1.26 mg/dL. Because urine leakage may occur without oliguria, if scrotal swelling is present, suspicion of urinary leakage and appropriate imaging test may help early renal function recovery.