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LETTER TO THE EDITOR

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# Early detection of an ureterovesical urinary leakage in a patient with normal renal function following kidney transplantation

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Sir:

Technetium-99m mercaptoacetyltriglycine (Tc-99m MAG3) renal scintigraphy is a noninvasive and accurate means of evaluating the morphology and function of a renal transplant and of detection of a urinary leakage following transplantation [1, 3, 4, 5]. Early identification of a urine leak coupled with aggressive intervention significantly reduces the associated morbidity and mortality. We present a case that confirms the value of Tc-99m MAG3 on the early detection of a clinically unsuspected urine leak some hours following renal transplantation.

A 36-year-old woman had been on hemodialysis since 1997. Renal failure was caused by chronic segmental glomerulonephritis. She received a cadaveric renal transplant in January, 1999. Following renal transplantation, plasma creatinine concentration was in the normal range, and urine volume was higher than 500 ml/day. A Tc-99m MAG3 renal scintigraphy was performed, as part of the standard protocol, and images were acquired for 20 min. Scintigraphy revealed normal perfusion and function of the graft. Three min. after the beginning of the test, focal Tc-99m MAG3 accumulation adjacent to bladder was detected, and a linear accumulation was observed along the peritoneal drain (Fig. 1). This suggested a ureterovesical urine leak, which was confirmed by radioactivity in the drain fluid. The patient was immediately reoperated on, and a urinary leak was detected in the vesicoureteral anastomosis of the graft.

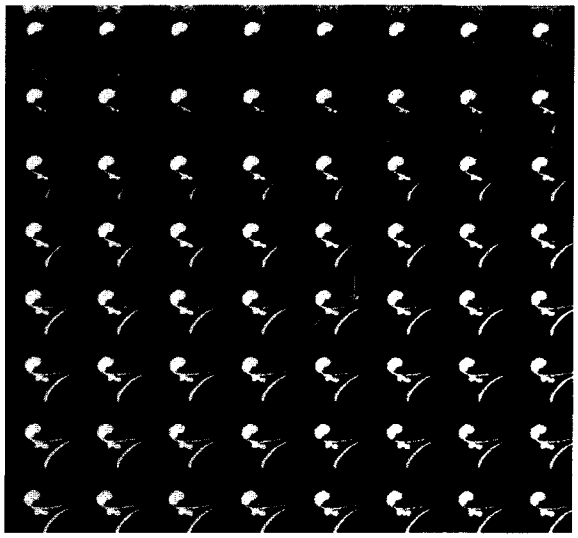

**Fig. 1** Tc-99m MAG3 renal scintigraphy with acquisition of 10-s images during 20 min. . Normal uptake and excretion of the radiotracer in the graft is revealed. A focal Tc-99m MAG3 accumulation adjacent to the bladder (short arrow) and a lineal accumulation along the peritoneal drain (large arrow) corresponded to an ureterovesical urinoma actively draining

Perivesical Tc-99m MAG3 extravasate may be difficult to distinguish from adjacent or nearby bladder activity on scintigraphic images [2]. Urinary leaks at the site of ureteroneocystostomy often occur early and are considered surgical emergencies. Urine extraction by percutaneous puncture often becomes necessary to prove the existence of the leak. Puncture was avoided in this patient since scintigraphic findings confirmed the existence of the leak and he could immediately be reoperated on.

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