Fibromuscular dysplasia in a transplanted kidney

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Renal history

A 53-year-old man received a cadaver renal transplant in February 1995. He had end-stage renal failure from adult polycystic kidney disease and had been on peritoneal dialysis since March 1994.

The donor was a 49-year-old woman who died of cerebral haemorrhage. The kidney was placed in the left iliac fossa with an end-to-side anastomosis to the left external iliac artery. Subsequently the patient had done well with stable renal function with a serum creatinine of 1.5 mg/dl and unremarkable urine analysis. Doppler ultrasonography, performed every 6 months, had always been within the normal limits. The patient was receiving prednisone 15 mg/day, cyclosporine 150 mg/day and azathioprine 50 mg/day.

Hypertension history

The patient had a 14-year history of hypertension. Following the transplant the blood pressure had initially been satisfactory but in June 1995 antihypertensive therapy had been started with clonidine 0.15 mg/day with good control of blood pressure. In July 1996 a mild vascular bruit was heard over the transplanted kidney. Doppler ultrasonography revealed a haemodynamic pattern suggestive of renovascular disease and, in September 1996, selective angiography was performed. This showed fibromuscular dysplasia of the donor renal artery (see Fig. 1). An angiogram performed on the recipient of the other kidney from the same donor did not show any evidence of fibromuscular dysplasia.

Discussion

Fibromuscular dysplasia of the donor renal artery is a very unusual cause of renovascular disease in renal transplant recipients [1]. Even with careful evaluation by Doppler ultrasound pre-transplant the diagnosis may be very difficult to make. In this case the finding of abdominal bruit led to a definitive diagnosis. Unfortunately there is considerable operator dependency in the utility of duplex ultrasound scanning for renal artery stenosis, with reported accuracy varying from 98% [2] to less than 10% [3].

References