

Case Reports

SUCCESSFUL LIVING RELATED KIDNEY TRANSPLANTATION DESPITE RENAL ANGIOMYOLIPOMA IN SITU

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Facing the shortage of donor organs physicians caring for patients with end stage renal disease are constantly reappraising all possible sources of allografts for their ethical and medical feasibility. Grafts previously considered as marginal or unsuitable have been successfully transplanted in the recent past.¹ To our knowledge, planned transplantation of a kidney with an unresectable angiomyolipoma has not been reported in the literature. We report on the successful outcome of a patient who received a kidney graft with angiomyolipoma in situ from his mother.

CASE REPORT

A 39-year-old white man with renal failure due to mesangioliproliferative glomerulonephritis was maintained on hemodialysis for 2 years. His 59-year-old mother volunteered for kidney donation. A 1 cm. hyperechoic mass was discovered in the right kidney on ultrasonography during the diagnostic donor evaluation. Computerized tomography (CT) confirmed the diagnosis of a centrally located angiomyolipoma (fig. 1). No stigma of tuberosus sclerosis was present in the donor, recipient or family.

Removal of the angiomyolipoma seemed unsuitable as we expected it to damage the kidney substantially due to its central location. Transplantation of the unaffected left kid-

ney was not considered as the patient and our team believed that the donor should retain the unaffected organ. After the patient and the prospective donor had been extensively informed concerning the risks and problems, they decided to proceed with the transplantation following an additional 9 months and repeated imaging procedures to decrease further the risk of an underlying malignancy.

On March 3, 1997 the donor underwent nephrectomy. As anticipated, inspection of the kidney after cold perfusion revealed no good possibility for ex vivo excision. The kidney was consequently implanted without further manipulation. The graft functioned immediately, no postoperative dialysis was required and the patient recovered without complications. Renal function was good and serum creatinine was 145 $\mu\text{mol/l}$. (normal less than 100) when he was discharged from the hospital on March 27, 1997. The angiomyolipoma appeared unchanged on CT immediately after transplantation. At followup 18 months later the tumor size had not changed (fig. 2) and renal function remained stable.

DISCUSSION

To our knowledge we report the first case of successful transplantation of a live donor kidney with an angiomyolipoma in situ. Only a few cases have been reported previously in which a kidney with an angiomyolipoma had been transplanted. In these cases the tumor was excised ex vivo before cadaveric¹ or live donor transplantation.² The role of excision

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FIG. 1. Contrast enhanced CT demonstrates angiomyolipoma (arrow, low density lesion, -69 HU diameter 11 mm.) in right kidney of prospective donor before kidney transplantation.



FIG. 2. CT shows angiomyolipoma (arrow) in renal allograft at followup 18 months after kidney transplantation.

in this setting remains unclear, especially as excision can be a source of complications such as hemorrhage or false aneurysms.¹ The angiomyolipoma in our case remained asymptomatic during followup, which is consistent with other reports and a large observational study of the natural history of angiomyolipomas smaller than 4 cm.³ We conclude that donor kidneys containing a small angiomyolipoma may be suitable for live donor transplantation but additional experience with longer followup is needed to validate this concept.

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