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LETTER TO THE EDITORS

Letter to the editor: giant angiomyxoid tumor in a renal allograft

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Tumors occurring *de novo* in renal allografts are rare [1]. We report a case of a giant tumor in a failed transplanted kidney presenting as an abdominal mass 12 years after transplantation.

A 44-year-old man with primary renal disease of glomerulonephritis as a child underwent renal transplant from a 32-year-old deceased brain-dead donor in 1996. The mismatch was 1:1:0; primary immunosuppresssion used were Neoral and prednisolone.

The patient experienced two steroid-responsive rejection episodes with complete recovery of serum creatinine. The renal transplant failed in 2004. Histology report prior to graft failure showed chronic allograft nephropathy. Neoral was ceased 3 months after the transplanted kidney failure, and hemodialysis was recommenced in November 2005.

The patient was asymptomatic until he was first noted to have a protruding abdomen at a consultation in August 2007; as he denied any symptoms, he declined intervention after this consultation. Increased abdominal girth was noted at another clinic visit in February 2008 with an obvious distended tender mass arising in the left iliac fossa, which extended across the midline and to the right. The mass was arising from the pelvis and reached the supra-umbilical region, at the site of the transplanted kidney. The patient, at this time, agreed to undergo a CT scan.

CT of the abdomen and pelvis with contrast from June 2008 showed the mass measuring $14 \times 18 \times 21$ cm (Fig. 1a). It appeared to be arising from the transplant kidney, encasing the iliac vessels. Given the size and its well-defined margins, it was thought to be benign. The patient consented for surgical excision of the mass in August 2008 because of increasing pressure symptoms.

A preoperative angiogram illustrated vascular supply of the pelvic mass originating from the transplant renal artery. Preoperative embolization of this artery was carried out to minimize blood loss during surgery.

A midline incision revealed a large tumor arising from the left transplanted kidney (Fig. 1b). The mass was adherent to the transverse colon, bladder and left body wall, surrounding iliac vessels and the urinary bladder. The mass was excised completely in two stages and the patient made an uneventful postoperative recovery.

Subsequent histology examination showed a large nodular mass measuring $26 \times 24 \times 13$ cm and weighing approximately 2 kg. Segments showed nodular myxoid and fatty tissue, completely replacing and extending beyond the failed transplant kidney, with no areas of frank necrosis. Microscopic examination reported a fibrous, myxoid and vascular lesion with spindle cells, and scattered infiltrate of inflammatory cells. The lesion partly involved the kidney with surrounding renal tubules in some areas. Most of the specimen was replaced by spindle cell formation; scanty nuclear pleomorphism was seen, but no necrosis was observed (Fig. 1c).

As a result of the unusual histological appearance, it was reviewed by histolopathologists from three different

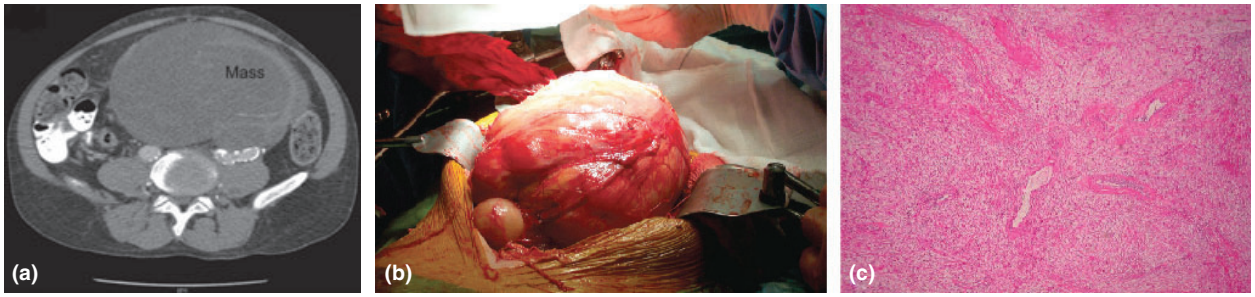

Figure 1 (a) CT scan showing the size and extent of the mass. (b) A large tumor arising from the left transplant kidney. (c) Microscopic examination showed fibrous myxoid and vascular lesion with spindle cells.

UK centres. A final consensus of an angiomyxoid soft tissue tumor was made.

A repeat abdominal CT scan of the abdomen in November 2009 as part of routine follow-up showed no recurrence. The patient remained asymptomatic, and was asked to be considered for a second kidney transplant.

Discussion

There is increased incidence of neoplasia in transplant patients compared with the general population; a dominant predictor of this is the intensity and duration of immunosuppression [2]. In nontransplant patients who receive immunosuppression for other conditions, they are equally likely to develop tumors [2,3].

Most tumors developing in transplant patients arise from the native kidneys and not the transplant [4]; *de novo* tumors in transplanted kidneys are very rare [1]. The Cincinnati Transplant Tumour Registry illustrates that tumors arising from the transplanted kidneys are largely malignant [4]; the only benign tumor reported in a renal allograft is an angiomyolipoma [1].

Angiomyxomas are rare myxoid neoplasms that occur chiefly in the genital, perineal, and pelvic regions of adult women [5]. These slow-growing tumors are chiefly characterized by its propensity to displace adjacent organs and its lack of metastatic potential [6].

Microscopically, the tumor is composed of spindled to stellate-shaped cells with ill-defined cytoplasm. They have thin or thick-walled vascular channels in myxoid stroma, rich in collagen. Cellularity is usually low except around the large vessels. Characteristic feature is presence of variable-sized vessels ranging from small capillaries to large vessels.

Despite its bland histological features, it has a tendency to recur locally. The recurrence rate is 35–72% even if clear surgical margins are achieved; the mainstay of management is surgical resection [5]. Radiological imagining is the follow-up of choice as, angiomyxomas are often asymptomatic unless they are large and compress structures nearby [5].

To the best of our knowledge, this is the first reported case of a giant benign tumor completely replacing the renal allograft, presenting as a large abdominal mass.

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