Case Report

Acute pseudorejection—intermittent dextrorotation of the uterus causing graft compression

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Introduction

Dextrorotation of the uterus is quite common in females without symptoms. A kidney graft is generally located in the extraperitoneal iliac fossa. We report here an anecdotal observation that dextrorotation of the uterus in a renal transplant patient may mimic acute rejection. The diagnosis was made by ultrasound and CT scan.

Case report

A 25-year-old unmarried female underwent cadaver renal transplantation in March 1996. The graft was implanted in the right iliac fossa.

Early graft function was excellent with serum creatinine maintained at 1.0 mg/dl. The patient was immunosuppressed with cyclosporin and prednisolone. Five months later, on 16 August 1996, she experienced a decrease of urine output with elevation of serum creatinine to 4 mg/dl within 2 days. Grey scale ultrasound showed normal size and position of graft kidney and no evidence of urinary-tract obstruction. Only an ovarian cyst of moderate size was found on the right side of uterus (Figure 1). A nuclear scan using $^{131}$I orthiodohippurate documented decreased effective renal plasma flow: 117 ml/min (normal 250 ml/min) and excretion index: 0.71 (normal 0.84–1.12). Biopsy did not show a definite pattern of acute rejection. Nevertheless the tentative diagnosis of acute rejection was entertained. The patient was admitted and treated with ALG for 7 days. At that time the serum creatinine was 1.6 mg/dl. Subsequently she was seen in the outpatient clinic. On 28 August 1996, she had a similar episode with a decrease in urine output and an elevation of serum creatinine. Again, she was ‘successfully’ treated with OKT3.

On 7 November 1996, the patient was again admitted because of similar complaints. With bed rest and without any further treatment, urine output and renal function improved spontaneously. On 7 November 1996, the pelvic CT showed a $5 \times 4 \times 4$-cm³ ovarian cyst on the left side of the uterus (Figure 2), which had not been seen previously by sonography. The clinical course was characterized by fluctuating urine output and serum creatinine concentration. A tentative diagnosis of extrinsic compression of the graft or ureter by an ovarian cyst resulting from intermittent dextrorotation of uterus was entertained.

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During pregnancy the uterus is movable. Some degree of dextrorotation occurs in a large proportion (80%) of normal pregnancies. With ascent of the uterus from the pelvis, it usually undergoes rotation to the right, so that its left margin faces anteriorly. In this case, dextrorotation was presumably caused mainly by the presence of the rectosigmoid colon on the left side of the pelvis. Typically, in pregnant women, ureteral dilatation above the pelvic brim is more marked on the right side. Schulman and Herlinger found ureteral dilatation to be greater on the right side in 86% of pregnant women studied [2]. The unequal degrees of dilatation may result from cushioning of the left ureter by the sigmoid colon; greater compression of the right ureter may be the consequence of dextrorotation of the uterus. Remarkable pregnancy-induced hydronephrosis with some degree of hydroureter formation has been demonstrated after transplant of a donor kidney to the iliac fossa [3]. After delivery, there is resolution and the urinary tract returns to prepregnant dimensions within 6–8 weeks.

Torsion of the pregnant uterus has rarely been diagnosed before surgery. The finding of a broad ligament stretched obliquely across the lower abdomen, torsion of the upper vagina or cervix, and malposition of the urethra in a patient complaining of pain should arouse suspicion. Successful detorsion by external manipulation has been reported, but laparotomy is usually necessary.

A review of the literature reveals no case of dextrorotation of the uterus causing obstructive uropathy in renal transplant recipients. Throughout the entire clinical course, bed rest may resolve such pseudorejection episodes. In our case, it was not until the incidental finding of an ovarian cyst on the right side of the uterus on sonography, turning upon the left side of the uterus by CT scan, that the diagnosis was made.

References


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