Chronic Renal Failure following Living-Related Kidney Donation

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Dear Sir,

Living-related kidney donation is a matter which involves many ethical and medical aspects. In Saudi Arabia most of the kidney transplants are from living-related donors because of the limited supply of cadaveric kidneys; the general impression being that kidney donation is safe for the donor provided careful evaluation has been done.

Recently, we saw a 30-year-old man who was on dialysis 6 years after donation of his kidney to his brother. His brother had end-stage renal disease of unknown etiology at the age of 24 years, 8 years ago. He received the kidney from his brother at another hospital in Jeddah and the transplant was uneventful. In fact, his creatinine had been in the range of 200 $\mu\text{mol/l}$ (2.27 mg/dl).

The donor presented to us 3 months ago feeling unwell, tired and had easy fatigability with paresthesia of the hands and feet. On examination, he was unwell and pale. His JVP was 3-4 cm. Blood pressure 140/90 mm Hg. The rest of his cardiovascular examination was unremarkable. Chest was clear and abdominal examination was normal. CNS examination was also normal.

Laboratory data showed his creatinine to be 850 $\mu\text{mol/l}$, urea 36 mmol/l, Na 137, K 4.9, bicarbonate 14.0 mmol/l, Ca 1.4 mmol/l, P₊ 2.04 mmol/l, alkaline phosphatase 117, liver function normal, Hb 7.5 g/dl, MCV 80.5, WBC 6.5, platelets 224 and PTH 417.

Ultrasound of the right kidney showed the size was 10.5 cm with a very thin cortex with increased echogenicity but no hydronephrosis. Urinalysis showed proteinuria ++, hematuria ++ and granular and hyaline casts. Chest x-ray was normal. Echocardiogram was normal. ECG was normal. Audiometry was normal.

A diagnosis of chronic renal failure was made and an A-V fistula on the left arm was established. He was put on vitamin D and calcium supplement. A kidney biopsy was not done because of the thin cortex.

This patient was started on hemodialysis 2 months later 3 times weekly.

This patient ended up on dialysis after a living-related donation to his brother. A thorough evaluation of the donor was done 6 years ago and according to hospital records no evidence of abnormalities was noted.

It is possible that this patient had a hereditary nephritis or he had glomerulonephritis on top of a single kidney and therefore the damage was more.

This case raises ethical issues of living-related donation. Although living-related donation is safe and usually carries no complications to the donor, this case is an exception.

It raises more ethical issues about living-related donations since there is still the possibility of disastrous complications.