Changes in native kidney size after kidney transplantation of polycystic kidney disease patients

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Objectives: Few studies show that native kidney size is reduced after kidney transplantation in autosomal dominant polycystic kidney patients.

Methods:

We measured the sagittal length of native kidneys in 9 autosomal dominant polycystic kidney disease patients, who underwent kidney transplantation surgery. We used computed tomography or abdominal sonography before surgery and every year after surgery. 6 patients underwent preemptive kidney transplantation, 2 patients were on hemodialysis, 1 patient was on peritoneal dialysis before surgery.

Results:

Mean kidney size was 16.59 ± 3.15 cm prior to kidney transplantation. After transplantation, kidney size reduced 7.93 ± 6.59 % (n=9), 8.40 ± 6.58 % (n=7), 7.79 ± 4.18 % (n=5), 10.03 ± 12.60 % (n=5) after 1, 2, 3, 4, 5 years. 7 native kidneys were reduced, but 1 kidney size was similar, 1 kidney was increased. Most kidney cyst and parenchymal size show decreased.

Conclusions:

Most kidneys decrease in size after kidney transplantation, but not always. Reduction of kidney occurs mainly early after transplantation.