Simultaneous Ipsilateral Native Nephrectomy With Kidney Transplantation is Safe and Beneficial for ESRD Patients With Polycystic Kidney Disease

Introduction and Objective: Prevention of perioperative complication related to enlarged polycystic native kidney is mandatory for kidney transplantation for patients of end-stage renal disease (ESRD) with polycystic kidney disease (PKD). Enlarged native kidney with PKD was simultaneously removed at kidney transplantation in order to secure allograft space at our institution. We reviewed clinical course and outcome of kidney transplantation for ESRD patients with PKD retrospectively.
Materials and Methods: Eleven patients (6 male and 5 female, medium age 54 ranged 37-67 y.o. at the transplantation) were enrolled in this study. Median post-operative observation period was 35 (9-134) months. Clinical backgrounds, surgical information, postoperative complications, and natural course of remaining kidney were evaluated.
Results: Inheritance of PKD was autosomal dominant in 10 and sporadic in 1. Five patients underwent transplantation preemptively. Donor source included living related in 10 patients, deceased donor in 1, and ABO blood type incompatible in 5. Native ipsilateral kidney was simultaneously removed with the transplantation except for one case whose native kidney had been removed previously due to infection. Median total operation time was 8.51 (5.06-11.51) hours. Median blood loss was 600 (530-1510) ml. All recipients are alive with functioning graft. Median nadir of serum creatinine level was 0.92 (0.5-1.9) mg/dl. Median current serum creatinine level is 1.02 (0.67-3.17) mg/dl. The patients experienced acute rejection in 4, viral infection in 2, bacterial native kidney infection in 2 (nephrectomized in 1), and ileus in 1. Remaining kidney size was reduced in 6 patients, no change in 4, and increased only in 1 patient who underwent native nephrectomy 11 years after the transplantation.
Conclusions: Native kidneys of PKD patients mostly reduce in size following successful kidney transplantation. Ipsilateral nephrectomy for the purpose of securing allograft space at the transplantation is safe and preferable procedure.