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상염색체 우성 다낭성 신종환자의 이식 시 시행한 신 절제술에 따른 혈압 병동 및 성적 비교

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The Effect of Native Nephrectomy on Blood Pressure Fluctuation and Graft Outcome in ADPKD Kidney Transplantation

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Background: Patients with autosomal dominant polycystic kidney disease (ADPKD) often undergo native nephrectomy upon kidney transplantation. However, its role and necessity remain controversial. This is a single center, retrospective study to determine the impact of native nephrectomy on blood pressure fluctuation and graft outcome in ADPKD patients.

Methods: We retrospectively reviewed 45 cases of kidney transplantations performed with simultaneous nephrectomy (n=25) or without native nephrectomy (n=20) at Seoul National University Hospital between 1999 and 2012. The glomerular filtration rate (GFR) was estimated by MDRD equation. We evaluated and compared immediate post-operative mean arterial blood pressure and following graft function between non-nephrectomy and simultaneous nephrectomy groups.

Results: Among 45 cases, 25 patients underwent simultaneous native nephrectomy. The reasons for nephrectomy partly included huge size of native kidneys (n=11, 44.0%) and previous infection history (n=1, 4%). Baseline characteristics including pre-operative mean arterial blood pressure (119.7±17.4 vs 114.8±13.5 mmHg, p=0.213), serum creatinine (6.53±2.11 vs 7.09±2.70 mg/dL, p=0.477) and MDRD-GFR (9.24±3.57 vs 10.53±10.08 mL/min/1.73m^2, p=0.713) were similar between non-nephrectomy and simultaneous nephrectomy groups. However, the immediate post-operative mean arterial blood pressures were lower in nephrectomy group (Day 1, 116.2±16.3 vs 108.0±17.9 mmHg, p=0.141; Day 2, 115.1±15.0 vs 113.0±15.8 mmHg, p=0.687; Day 3, 123.6±12.7 vs 113.5±17.1 mmHg, p=0.019). In addition, the serum creatinine was significantly elevated in the nephrectomy group (post-op 1 month, 1.15±0.21 vs 1.46±0.90 mg/dL, p=0.08; post-op 3 month, 1.17±0.22 vs 1.59±1.27 mg/dL, p=0.044; post-op 6 month, 1.14±0.18 vs 1.65±1.64 mg/dL, p=0.009).

Conclusions: Simultaneous native nephrectomy during kidney transplantation in the ADPKD patients may lower systemic blood pressure and subsequently result in graft dysfunction.

Key Words: 신장 이식, 상염색체 우성 다낭성 신종, 혈압 변동
Kidney transplantation, ADPKD, Blood pressure fluctuation