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신장이식이 만성신부전 환자들의 동맥경화도에 미치는 영향

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Impact of Kidney Transplantation on Arterial Stiffness in Patients with ESRD

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Background/Aims: Arterial stiffness is closely associated with cardiovascular mortality in end-stage renal disease (ESRD) patients, We investigated whether kidney transplantation (KT) can improve arterial stiffness in patients with ESRD.
Methods: We measured the change of arterial stiffness by brachial-ankle pulse wave velocity (baPWV) and ABI (Ankle-brachial blood pressure index) before and after KT. Fifty six patients were included and these patients were divided into improvement and non-improvement groups based on change of baPWV after KT .We also compared risk factors which affect arterial stiffness between two groups.
Results: Overall arterial stiffness measured by baPWV after KT showed significant improvement (1456.09±232.99 cm/s) compared to those of before KT (1550±2962 cm/s) ($p<0.05$ vs after KT). Mean ABI levels after KT were also significantly changed compared to those of before KT (1.17±0.14 m/s vs 1.11±0.09 m/s, $p<0.05$). 36 out of 56 patients (64.3%) showed improvement of baPWV after KT, but 20 patients did not. Between two groups, improvement group showed higher pre-transplant baPWV than no-improvement group (1608.41±248.47 vs. 1396.65±171.44), and multivariate analysis revealed that , gender was an independent risk factor of change of baPWV.
Conclusions: Arterial stiffness in ESRD patients improves after transplantation, and, the better improvement was observed in patients with high baPWV before KT.

Key Words: 신장이식, 맥파검사, 동맥경화도
Kidney transplantation, Pulse-wave velocity, Arterial stiffness