

만성 신질환 환자의 신질환 예후에 대한 예측인자로서 망막증의 의미; 심장초음파 지표들과의 비교

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황현석, 최유아, 김세영, 장윤경, 양철우, 김석영, 윤희은

Retinopathy is a Better Predictor for Renal Outcomes than Echocardiographic Parameters in Patients with Chronic Kidney Disease

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Aim: Retinopathy and cardiac abnormalities are prevalent in chronic kidney disease (CKD) patients. Echocardiographic parameters are known to be associated with progression of CKD. However, the clinical impact of retinopathy on renal outcomes is less clear in CKD patients.

Methods: Four hundred and two patients with nondialysis-dependent CKD stage 3-5 were included, who were evaluated with presence of retinopathy and echocardiography. We investigated whether retinopathy was predictive for CKD progression and whether retinopathy is more predictive for renal outcome than echocardiographic parameters.

Results: Retinopathy was observed in 181 CKD patients (45.0%). The rate of estimated glomerular filtration rate (eGFR) decline was significantly faster in patients with retinopathy compared with those without retinopathy (-6.6 ± 10.0 ml/min/1.73m²/year vs. -3.5 ± 9.6 ml/min/1.73m²/year; $p=0.001$). Patients with retinopathy showed a lower dialysis-free survival rate than those without retinopathy ($p=0.02$). The echocardiographic parameters of systolic and diastolic dysfunction did not differ between patients with and without retinopathy. The presence of retinopathy, lower ejection fraction and higher left ventricular mass index was associated with rate of eGFR decline. In a multivariate analysis, retinopathy was an independent predictor for renal function decline ($\beta=-2.23$, $p=0.047$), but ejection fraction and left ventricular mass index did not show significant associations with rate of eGFR decline.

Conclusions: Retinopathy is independently associated with renal outcomes in patients with CKD, and the examination of retinopathy is more useful than echocardiographic parameters to identify high-risk patients for CKD progression.

Key Words: 만성신질환, 망막증, 심장초음파

Chronic kidney disease, Retinopathy, Echocardiography