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복막투석 시작환자에 있어서 좌심실 동심성 변화의 예후 분석

원광대학교 의과대학 산본병원 내과학교실[1], 연세대학교 의과대학 내과학교실 BK 21의과학 사업단[2]

김현욱[1] · 박정탁[2] · 장태익[2] · 유태현[2] · 강신욱[2]

Left Ventricular Concentric Geometry is a More Important Prognostic Factor than Left Ventricular Mass Index in Incident Peritoneal Dialysis Patients

Hyunwook Kim[1], Jung Tak Park[2], Tae Ik Chang[2], Tae-Hyun Yoo[2], Shin-Wook Kang[2]

Department of Internal Medicine[1] Wonkwang University College of Medicine Sanbon Hospital
Department of Internal Medicine[2] Brain Korea 21 for Medical Science Yonsei University

Introduction and Aims : Cardiovascular disease is the leading cause of death in patients with end-stage renal disease (ESRD). Previous studies have demonstrated that echocardiographic estimates of left ventricular (LV) indices are important prognostic factors in ESRD patients, but it is not fully explored which index is a more relevant predictor for the outcomes in incident peritoneal dialysis (PD) patients. This study was undertaken to investigate the prognostic value of ejection fraction (EF), LV mass index (LVMI), and LV geometric pattern in new PD patients.METHODS: Two hundred and ninety nine patients, who underwent echocardiography within 2 weeks after the start of PD, were included. All echocardiographic measurements were performed according to American Society of Echocardiography and the demographic, anthropometric, and biochemical characteristics of the study population were retrospectively reviewed.

Results : The mean age was 56.2±12.5 years with sex ratio of 1.3:1 (M:F). One hundred and forty four patients were diabetes and the mean Charlson comorbidity index was 3.6±1.6. The mean EF was 53.5±15.6% and the mean LVMI 145.4±44.5 g/m^2. LV hypertrophy (LVMI >115 g/m^2 in men and > 95 g/m^2 in women) were present in 243 patients and 47.8% had LV concentric geometry (relative wall thickness >0.42). During the follow-up period (the median follow-up duration: 25.8 months), 90 cardiovascular events and 75 deaths were observed. Multivariate Cox regression analysis revealed that EF (1% decrease) was an independent predictor for all-cause mortality, cardiovascular mortality, and fatal and nonfatal cardiovascular event (HR [95% CI]: 1.04 [1.02-1.06], 1.04 [1.02-1.05], and 1.03 [1.01-1.04], respectively), even after adjustment for age, sex, Charlson comorbidity index, hemoglobin and total cholesterol levels, systolic blood pressure, and body mass index. The presence of LV concentric geometry was also an independent predictor for all cause mortality (HR [95% CI]: 1.95 [1.08-3.53]). In contrast, LVMI did not predict any outcome.

Conclusion : In conclusion, the presence of LV concentric geometry is a more relevant factor than LVMI in predicting the outcome of new PD patients independently of EF

Key Words : 복막투석, 심초음파, 예후인자
Peritoneal dialysis, Echocardiography, Clinical outcomes