

이완기 심부전을 가진 만성 신부전 환자에서 도플러 초음파상 E/E' 수치가 사망률에 미치는 영향

연세대학교 원주의과대학 내과학교실

유종명 · 양재원 · 한승태 · 김영섭 · 송신한 · 한병근 · 최승옥

The Relation of E/E' Ratio on Doppler Tissue Imaging and Mortality in Patients with Chronic Kidney Disease and Diastolic Heart Failure

Yu Jong Myeong, Yang Jae Won, Han Seung Tae, Kim Young Sub
Song Shin Han, Han Byoung Geun, Choi Seung Ok

Yonsei University Wonju College of Medicine Department of Internal Medicine

Background: Heart failure is also an increasingly prevalent condition and the leading cause of death among cardiovascular diseases in patients with CKD or ESRD. The development of doppler tissue imaging (DTI) technology permitted to characterize relation of the peak transmitral flow velocity (E) to peak mitral annulus velocity (E') ratio to diastolic dysfunction. E/E' ratio gives incremental predictive power for cardiac mortality compared to clinical data and standard echocardiographic measurements in cardiac patients.

Methods: In 190 patients with CKD stage III to V with dyspnea, we measured routine blood test, 24 hr urine test, and echocardiography including M-mode test and doppler tissue imaging. A 5 year follow up study was performed based on hospitalization records, medical records, and telephone interview to confirm whether any of the patients had died. multiple logistic regression analysis was performed to identify the correlations between the parameters associated with mortality.

Results: A total of 190 patients, including 103 men (54.2%) and 87 women with a mean age 60.18 ± 13.53 years. In doppler tissue imaging, 140 cases showed diastolic heart failure (73.7%). 5 year mortality rates of total patients was 48 cases (25.3%). Mortality group showed that old age ($p=0.001$), increased CRP ($p=0.019$), increased E/E' ratio ($p=0.003$) compared with survival group. Multivariate analysis showed that E/E' ratio ($p=0.016$) was more predictable value for mortality rate than age ($p=0.135$) and CRP ($p=0.108$).

Conclusion: E/E' ratio on doppler tissue imaging was useful indicator for predicting mortality in patients with chronic kidney disease and diastolic heart failure.

Key Words: 만성 신부전, 이완기 심부전, 도플러 심초음파
Chronic kidney disease, Diastolic heart failure, E/E'