

만성콩팥병 진행 지표로서의 혈청 유리 경쇄

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황현철, 고은실, 정성진, 박철휘, 양철우, 김용수, 장윤식, 신석준

Serum Free Light Chains as Markers of Progression in Chronic Kidney Disease

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Introduction: In patients with chronic kidney disease (CKD), as the glomerular filtration rate (GFR) reduces, the renal clearance of free light chains (FLC) decreases. The aim of this study was to investigate FLC as a marker for kidney damage and as predictors for progression of CKD.

Methods: Serum and urine FLC were assayed in 318 CKD patients and the control. Clinical and biochemical parameters including estimated GFR (CKD-EPI) were evaluated.

Results: There were no significant differences in age, gender, hs-CRP and LDH between the control and CKD group, however, serum kappa and lambda FLC levels were higher in the CKD group than in the control ($p < 0.01$). In the univariate regression analysis, serum and urine kappa and lambda FLC, age and LDH level were associated with estimated GFR. In multivariate linear regression analysis, only serum kappa and lambda FLC were associated with eGFR ($\beta = -1.435$, $p < 0.01$ for kappa and $\beta = -1.227$, $p < 0.01$ for lambda, respectively). Furthermore, urine lambda was significantly associated with urine albumin after adjusting factors ($\beta = 1.63$, $p < 0.01$).

Conclusion: These data suggest that serum kappa and lambda FLC may be used as predictors for progressive renal dysfunction in patients with CKD, and urine lambda FLC might be a marker for the detection of kidney damage.

Key Words: 만성콩팥병, 유리경쇄, 알부민뇨

Chronic kidney disease, Free light chain, Albuminuria