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IgA 신증의 진행 예측 인자로써의 뇨 cystatin C

부산대학교병원 신장내과[1], 부산대학교병원 의생명연구소[2], 부산대학교병원 간호부[3]

정우진[1], 이하린[1], 최상아[1], 신민지[1], 양병윤[1], 곽임수[1]
양지영[2], 박경주[3], 백민자[3], 장금숙[3], 이연주[3], 성은영[1]

The Prognostic Impact of Urine Cystatin C in the Patients with IgA Nephropathy

Woo Jin Jung[1], Harin Rhee[1], Sang A Choi[1], Min Ji Shin[1], Byung Yoon Yang[1]
Ihm Soo Kwak[1], Ji Young Yang[2], Kyung Joo Park[3], Min Ja Baek[3]
Keum Sook Jang[3], Yoen Ju Lee[3], Eun Young Seong[1]

Pusan National University Hospital Nephrology[1]
Pusan National University Hospital Biomedical Institute[2]
Pusan National University Hospital Nursing Part[3]

Introduction: The aim of this study is to define whether the urine or serum cystatin C could be the prognostic marker of renal progression in the patients with IgA nephropathy.

Methods: From January 2005 to December 2010, patients with biopsy proven IgA nephropathy whose serum and urine samples at the time of kidney biopsy were conserved with frozen state, were enrolled in this study. We retrospectively reviewed their clinical data and followed them up till December 2012. Serum and urine cystatin C levels were measured using ELISA kit and the urine cystatin C levels were corrected by the urine creatinine level. Renal progression was defined as eGFR decline more than fifty percent or progression to end-stage renal disease .

Results: A total of 107 patients were enrolled in this study and median follow up period was 34.2 month. 57.9% of the patients were male and mean patient's age was 33.06±13.41. During the follow up period, renal progression was found in 6.5% of the patients. Compared to the non progressor, serum cystatin C levels were not different in the renal progression group (0.95±0.27 vs 1.04±0.29, p=0.441), however urine cystatin C/creatinine ratio was significantly higher in the renal progression group (43.48±62.59 vs 117.25±200.69, p=0.017). In the multivariable analysis, urine cystatin C/creatinine ratio was an independent predictor of renal progression in IgA nephropathy (HR 1.006 95%CI 1.001-1.010, p=0.012) along with the severe tubule-interstitial histopathologic damage by oxford classification (T2)(HR 13.77, 95%CI 2.267-83.705, p=0.004).

Conclusion: Urine cystatin C corrected by urine creatinine is a prognostic marker of renal progression in the patients with IgA nephropathy.

Key Words: 사구체 신염, IgA 신증, 시스타틴 C
Glomerulonephritis, IgA nephropathy, Cystatin C