

IgA 신장병증에서 혈청 유리형 경쇄의 임상적 의의

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Clinical Implication of Serum Free Light Chain in Patients with IgA Nephropathy

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Backgrounds: Although free light chains (FLCs) which are produced in excess during immunoglobulin synthesis by plasma cells have been identified as a predictive factor of mortality in chronic kidney disease as well as a tool for diagnosis of plasma cell dyscrasia, little is known about the clinical implication of FLCs in patients with IgA nephropathy.

Objectives: To investigate the relationship between the serum level of kappa and lambda FLCs and clinical markers in patients with IgA nephropathy.

Methods: This retrospective study analyzed consecutive 42 patients with biopsy-proven IgA nephropathy without renal function impairment (estimated glomerular filtration rate (eGFR) ≥ 60 ml/min/1.73m²) at the Pusan National University Hospital from January 2010 to December 2013. Clinical and laboratory data were collected by medical records reviewing.

Results: The median (inter-quartile range) of kappa lambda were 18.8 (14.4-24.5) and 21.5 (17.3-25.5), respectively. In correlation analyses, log-transformed kappa and lambda FLCs were both positively associated with age, mean arterial pressure, IgG and log-transformed urinary protein creatinine ratio (uPCR), and negatively associated with albumin and hemoglobin levels. In multivariate regression models, increased kappa and lambda FLCs were both independently associated with higher log-transformed uPCR after adjusting confounding factors. However, no significant association of FLCs with eGFR and pathologic classification was observed.

Conclusion: The cFLC level was independently associated with the magnitude of proteinuria in patients with IgA nephropathy. Our finding suggests that cFLC can be a prognostic maker in IgA nephropathy.

Key Words: IgA 신장병증, 경쇄 면역글로불린, 단백뇨
IgA glomerulonephritis, Immunoglobulin light chain, Proteinuria