

IgA 신증 환자에서 예후 인자로서 사구체 밀도의 의의

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함영록, 배홍진, 장원익, 최대은, 나기량, 이강욱, 신영태

Glomerular Density As a Prognostic Factor in IgA Nephropathy

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Introduction: An early histological predictor of the renal prognosis remains to be established in IgA nephropathy. The low glomerular number was associated with hypertension and renal insufficiency. Larger mean glomerular volume correlated with lower glomerular number and glomerular density (the number of nonsclerotic glomeruli per renal cortical area, GD). The aim of this study was to investigate the relationship between GD and the long-term renal outcome of patients with IgA nephropathy with eGFR ≥ 60 ml/min per 1.73m^2 at the time of renal biopsy.

Methods: The study included 142 biopsy-proven IgA nephropathy patients with eGFR ≥ 60 ml/min per 1.73m^2 . The GD was determined by calculating the number of glomeruli that were not globally sclerotic per total renal cortical area, which was measured using a computed imaging analyzer (Aperio[®], Vista, CA, U.S.A.). The predictive factors of renal outcome, including glomerular density, were retrospectively analyzed in 142 patients with IgA nephropathy. The progression group was defined as patients whose final eGFR was decreased more than 20% compared to baseline level.

Results: The average length of the follow-up was 5.6 years. Twenty-four patients of 142 patients (16.6%) showed a reduction of eGFR more than 20% compared to baseline eGFR. The mean value of the GD was $4.65/\text{mm}^2$ (range; 4 to $21.3/\text{mm}^2$). The GD showed an inverse correlation with mean glomerular volume ($R = -0.289$, $p < 0.001$). The magnitude of GD and global sclerosis were significant independent predictors of progression of renal dysfunction in a multivariate analysis ($p < 0.001$, $p < 0.009$). The eGFR, proteinuria, and a presence of hypertension were not proven to be independent predictors of the prognosis.

Conclusion: This study suggests that GD may be served as an early histopathologic marker of prognosis in IgA nephropathy patients with relatively preserved renal function.

Key Words: IgA 신증, 사구체 밀도, 예후

IgA nephropathy, Glomerular density, Prognosis