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## Prognostic significance of proteinuria in patients with IgA nephropathy in a Single Center Study

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**Objectives :** IgA nephropathy (IgAN) is an immune complex-mediated glomerulonephritis defined by the presence of diffuse mesangial IgA deposits. IgAN is reported for the most common primary glomerulonephritis in South Korea and the major cause of end-stage renal disease. Proteinuria is one of poor prognostic factor in IgAN. We examined the different clinical manifestations and progression of renal function according to amount of proteinuria in a single center.

**Methods :** We reviewed 302 patients who were diagnosed to IgAN by kidney biopsies during the period from January, 2009 to June, 2016 in the context of the clinical features and pathologic findings, retrospectively. We divided these patients to two groups by amounts of proteinuria. Patients of NS group had proteinuria of more than 3.5 mg/day and the others were non-NS group. eGFR was calculated by 2012 CKD-EPI formula. We divided the patients by histologic stage into mild (class I and II), moderate (class III) and severe (class IV and V) using Haas classification. Definition of rapid progression of eGFR was more than 5 mL/min/1.73m2. Data were presented by mean ± S.D.

**Results :** Among clinical manifestation, age, systolic blood pressure (BP), diastolic BP, heart rate, uric acid, serum sodium, serum potassium, total CO2, CRP, serum protein, serum albumin and LDL-cholesterol were different significantly between NS and non-NS groups at the time of kidney biopsy. Acute kidney injury (AKI) developed more frequent in the NS group than in the non-NS group [13.8 vs. 28.6 %, p=0.008]. Histologic stages were more progressed in the NS group than in the non-NS group [mild (30.5 vs. 22%), moderate (46.3 vs. 26%), severe (23.2 vs. 52%), p<0.001].
On the follow-up data, eGFR progression rate except patients with AKI at the time of kidney biopsy was related with urine protein-creatinine ratio [r = -0.216, p = 0.001]. But, rapid progression rate of eGFR was not different significantly on both NS and non-NS group [40.0 vs. 25.3%, p = 0.097].

Conclusions : IgAN patients with nephrotic range proteinuria had more frequent AKI and showed h histologic severe progression by Haas classification. Proteinuria were correlated with the progression rate of eGFR. We should effort to reduce the proteinuria for preventing deterioration of renal function in IgAN patients with nephrotic range proteinuria.

Keywords : IgAN, Proteinuria, CKD, Kidey biopsy