Abstract Type : Poster exhibition
Abstract Submission No.: A-0405
Abstract Topic : Glomerular and Tubulointerstitial Disorders

Prognostic significance of Soluble urokinase-type plasminogen activator receptor (suPAR) in patients with glomerulonephritis: Association with renal outcomes

Ji-Young Choi[1], Jeong-Hoon Lim[1], Mingyu Kim[1], You Hyun Jeon[2], Hee-Yeon Jung[2], Jang-Hee Cho[2], Chan-Duck Kim[2], Yong-Lim Kim[2], Sun-Hee Park[2]
[1]Department of Internal Medicine-Nephrology, Kyungpook National University Medical Center, Korea, Republic of
[2]Department of Internal Medicine-Nephrology, Kyungpook National University Hospital, Korea, Republic of

Objectives : Studies determining the relation between soluble urokinase-type plasminogen activator receptor (suPAR) levels and clinical outcomes in glomerulonephritis (GN) are limited. In this study, we aimed to investigate the association between suPAR levels and renal outcomes in patients with GN.
Methods : A total of 96 patients diagnosed with primary GN on renal biopsy in two tertiary hospitals between 2013 and 2020, who underwent both baseline and follow-up sampling and consented to participate, were included. Serum suPAR levels were measured at the time of biopsy and during follow-up. The association between serum suPAR levels and the reduction of renal function and proteinuria was analyzed.
Results : The most common GN was IgA nephropathy, followed by focal segmental glomerulosclerosis, membranous nephropathy and minimal change disease. The median follow-up duration was 2.3 years. Ln(suPAR) levels, logarithmically transformed on a natural log of suPAR showed no significant difference according to the type of GN at the time of biopsy (p=0.42), but there was a significant difference at follow-up (p=0.018). There was a significant difference in the change in Ln(suPAR) per year (%/year) among GN groups (p<0.001). Higher baseline Ln(suPAR) levels were significantly associated with eGFR decline in the Cox proportional hazards model (HR 1.760, 95% CI 1.101-2.813, p=0.018), although they were not significantly associated with a reduction in the urine protein-to-creatinine ratio (UPCR) (HR 1.540, 95% CI 0.988-2.386, p=0.057). Kaplan-Meier analysis showed that patients in the highest tertile of Ln(suPAR) at the time of biopsy exhibited a faster eGFR decline (p=0.019). However, there was no statistical significance for reduction of UPCR (p=0.065).
Conclusions : Higher suPAR levels at the time of biopsy are associated with eGFR decline in patients with GN, although they are not significantly associated with the reduction of proteinuria. suPAR could be suggested as a potential marker for renal outcomes in GN.

Fig1. Delta suPAR by diagnosis.png

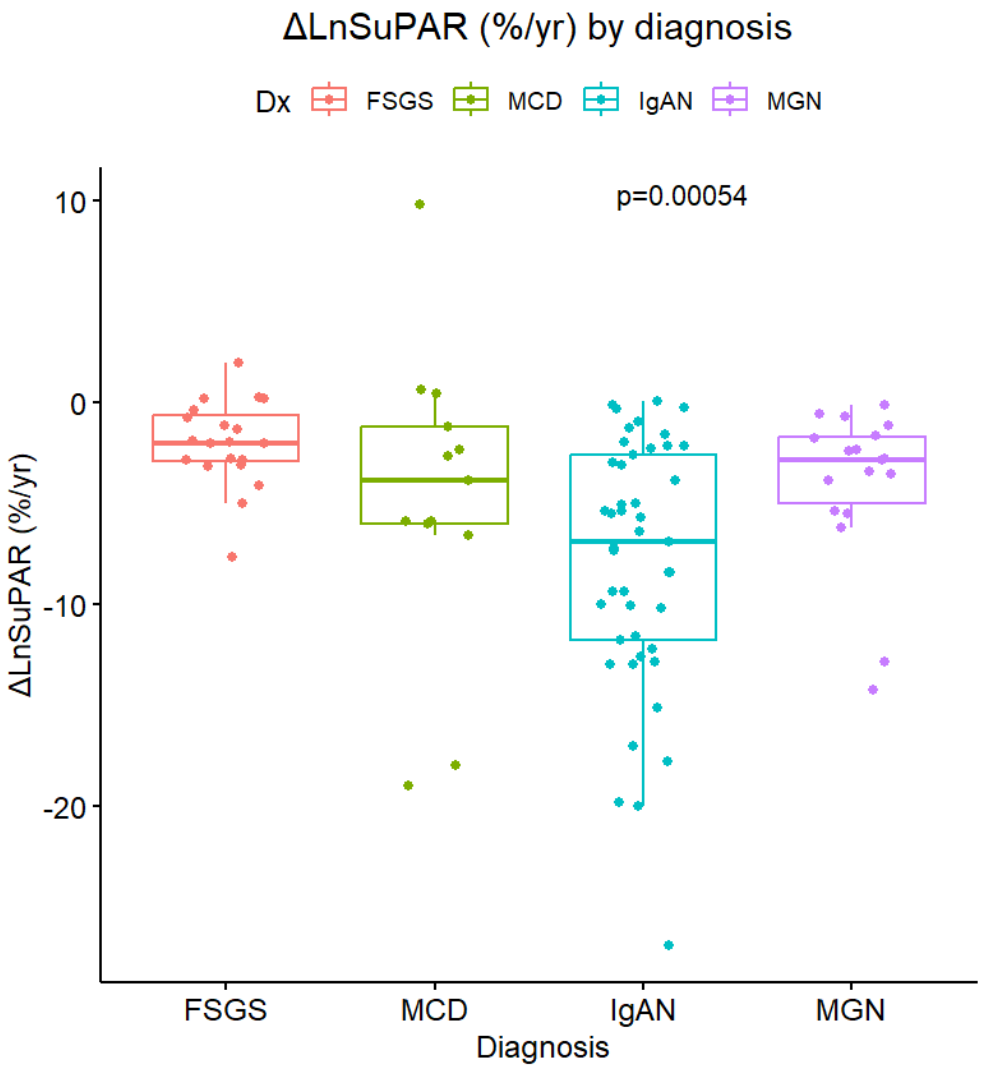

Fig1. Delta suPAR by diagnosis.png

THE KOREAN SOCIETY OF NEPHROLOGY
KSN 2025 SEOUL, KOREA
June 19 (Thu) – 22 (Sun), 2025 Coex, Seoul, Korea
Beyond Challenges, Towards Healthier Kidney