KSN 2021
FULLY VIRTUAL MEETING
September 02 (Thu) - 05 (Sun)

Abstract Submission No. : 2562

Clinical predictors for treatment response in patients with biopsy-proven Lupus nephritis; CMC GN registry.

YOUNGDONG JEON[1], Yong-Soo Kim[2], Tae Hyun Ban[3], Yoon Kyung Chang[5], Seok Jun Shin[6], Ho Chul Song[4], Sungjin Chung[7], Young Ok Kim[8], Hyung Wook Kim[1], Yong Kyun Kim[1]
[1]Department of Internal Medicine-Nephrology, The Catholic University of Korea, St. Vincent's Hospital, Korea, Republic of
[2]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Seoul St. Mary's Hospital, Korea, Republic of
[3]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Eunpyeong St. Mary's Hospital, Korea, Republic of
[4]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Bucheon St. Mary's Hospital, Korea, Republic of
[5]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Daejeon St. Mary's Hospital, Korea, Republic of
[6]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Incheon St. Mary's Hospital, Korea, Republic of
[7]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Yeouido St. Mary's Hospital, Korea, Republic of
[8]Department of Internal Medicine-Nephrology, The Catholic University of Korea, Uijeongbu St. Mary's Hospital, Korea, Republic of

Objectives: As one of the manifestations of SLE, Lupus nephritis can lead extensive kidney injury and renal function impairment. Despite of the standard immunosuppressive therapy for Lupus nephritis, some patients can not achieve remission state. In this study, we investigated the clinical predictors for treatment response in Lupus nephritis.

Methods: In total, seventy patients with biopsy-proven lupus nephritis with a renal biopsy-confirmed diagnosis of LN class III through V and received induction therapy were selected from the Catholic Medical Center Glomerulonephritis Registry. The baseline clinical characteristics were obtained when a renal biopsy was performed. After induction therapy, we divided the patients into two groups, which are response group and non-response group. Responder group was defined as patients achieved complete remission or partial remission and non-responder group was defined as patients failed to achieve response.

Results: Forty-seven (67.1%) patients achieved complete remission or partial remission and twenty-three (32.9%) patients failed to achieve response. Low serum creatinine level, low estimated GFR and low UPCR was significantly associated with the response group (p=.002, p-value 0.009 and p=0.031, respectively). However, factors such as C3 (p=0.928), C4 (p-value 0.798), anti-dsDNA (p=0.173) showed no statistical significance between two groups.

Conclusions: Our data suggest that baseline serum creatinine, estimated GFR, and UPCR can predict treatment response after induction in patients with lupus nephritis.

Table. Baseline clinical characteristics between response group and non-response group

☐ **Table. Baseline clinical characteristics between response group and non-response group.**

Characteristics	Response Group (n=47)	Non-response Group (n=23)	*p*-value
Age (years; mean±SD)	37.31 ± 12.06	41.95 ± 15.89	0.179
No. of Female (%)	40 (85.1%)	20 (86.9%)	0.573
BMI (kg/m^2)	23.54 ± 4.88	23.08 ± 6.08	0.731
Hb (g/dL)	10.83 ± 2.02	10.13 ± 1.94	0.171
Hct (%)	32.32 ± 6.07	30.62 ± 5.70	0.265
Platelet (x10^3/μL)	196.00 ± 73.07	211.13 ± 87.28	0.448
ESR (mm/h)	17.19 ± 14.55	18.21 ± 14.04	0.780
CRP (mg/dL)	0.53 ± 1.82	0.48 ± 0.88	0.904
BUN (mg/dL)	19.88 ± 10.77	27.64 ± 13.27	0.011
Cr (mg/dL; mean±SD)	**0.69 ± 0.30**	**1.05 ± 0.62**	**0.002**
eGFR-MDRD (ml/min/1.73m^2; mean±SD)	**113.18 ± 46.53**	**82.25 ± 41.93**	**0.009**
Total protein (g/dL)	5.59 ± 0.98	5.67 ± 0.95	0.741
Albumin (g/dL)	2.93 ± 0.71	2.76 ± 0.67	0.327
C3 (mg/dL; mean±SD)	54.02 ± 23.66	54.57 ± 23.95	0.928
C4 (mg/dL; mean±SD)	12.00 ± 9.49	11.38 ± 9.66	0.798
Anti-dsDNA (IU/mL; median-IQR)	203.77 (3.95-800.0)	122.27 (1.33-666.9)	0.173
UPCR (g/g; meadin-IQR)	**3.54 (0.47-11.48)**	**5.80 (0.48-21.30)**	**0.031**
ISN/RPS 2003 Class (No. (%))			
Ⅱ / Ⅱ + Ⅴ	5 (10.6%)	1 (4.3%)	
Ⅲ / Ⅲ+Ⅴ	13 (27.7%)	3 (13.0%)	
Ⅳ / Ⅳ + Ⅴ	26 (55.3%)	16 (69.6%)	
Ⅴ	3 (6.4%)	3 (13.0%)	
UPCR at 6-month (g/g; median-IQR)	0.31 (0.02-0.91)	2.48 (1.02-17.24)	0.000

- Response group includes complete response and partial response. Non-response group fails to achieve a partial or complete response.
- **MDRD**: Modification of Diet in Renal Disease Study; **C3**: Complement component 3; **C4**: Complement component 4; **dsDNA**: double-stranded DNA; **UPCR**: urine protein-creatinine ratio; **ISN/PCR**: International Society of Nephrology and Renal Pathology Society; **SD**: standard deviation; **IQR**: interquartile range.