



RENAL OUTCOME PREDICTORS IN IMMUNOGLOBULIN A NEPHROPATHY



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BACKGROUND

Immunoglobulin A nephropathy (IgAN), the most common primary glomerulonephritis in the world, is characterized by a heterogeneous clinical course. In the present study, we aimed to identify clinical and histopathological features that predict renal survival from a dataset of patients with IgAN who underwent renal biopsy in our tertiary center between 1998 and 2013.

METHODS

We retrospectively examined the outcome at 31 December 2014 of 99 adult patients (median age 39 [35-43] years, 69% male, eGFR 51.91 [46.92-56.90] mL/min – CKD-EPI) with biopsy proven IgAN.

The primary endpoint was renal survival defined as renal replacement therapy initiation. Univariate and multivariate analyses of factors affecting renal survival were done by Cox proportional hazard models.

RESULTS

Hypertension was found in 52% of the subjects; median 24h proteinuria and hematuria were 2 [1.5-2.2]g and 100 [70-180] cells/mm³, respectively. Most of the patients (97%) received angiotensin-converting enzyme inhibitor (ACEI) agents, while only 39% were on immunospressive therapy (corticosteroids plus cyclophosphamide). Sixty-seven percent of renal biopsies showed M1, 23% E1, 78% T1 and 66% S1.

Twenty-two percent of the patients reached the endpoint; the mean kidney survival time of the entire cohort was 12.1 [10.6-13.5] years.

Univariate and multivariate Cox regression analyses

	Univariate analysis			Multivariate analysis		
	HR	95%CI	p	HR	95%CI	p
Male (vs. female)	1.21	0.47-3.10	0.68	-	-	-
Age (1 year increase)	1.01	0.98-1.04	0.43	-	-	-
Hypertension (vs. absence)	0.31	1.21-7.97	0.01	2.35	0.81-6.80	1.11
Hb (1g/dL decrease)	0.69	0.54-0.88	<0.01	0.93	0.71-1.21	0.60
ESR (10mm/h increase)	1.05	0.99-1.11	0.08	0.99	0.86-1.19	0.97
eGFR (10mL/min decrease)	0.49	0.36-0.67	<0.01	0.62	0.44-0.86	<0.01
24hPE (0.5g/24h increase)	1.26	0.96-1.65	0.09	1.68	1.12-2.51	0.01
Hematuria (20 cells/mm ³ decrease)	0.99	0.96-1.02	0.52	-	-	-
ACEI (vs. no)	0.20	0.04-0.87	0.03	0.41	0.07-2.29	0.31
Immunosuppressive treatment (vs. no)	0.17	0.04-0.75	0.01	0.13	0.03-0.63	0.01
M1 (vs. M0)	1.19	0.46-3.05	0.71	-	-	-
E1 (vs. E0)	2.29	0.95-5.47	0.06	4.18	1.30-13.45	0.01
T1 (vs. T0)	6.19	0.83-46.09	0.07	1.44	0.15-13.08	0.74
S1 (vs. S0)	2.77	0.93-8.23	0.06	6.48	1.48-28.38	0.01

HR hazard ratio; 95%CI – confidence interval

CONCLUSIONS

Our study demonstrates that impaired renal function and proteinuria at diagnosis remain the most significant clinical factors for IgAN progression. As for the Oxford classification, only endocapillary hypercellularity and segmental glomerulosclerosis proved to be of prognostic significance.

