

Characteristic and survival of dialysis patients due to Cardiorenal syndrome type II

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Background/Aims: Clinical outcomes in patients with cardiorenal syndrome type (CRS) II those were treated with peritoneal dialysis (PD) or hemodialysis (HD). **Methods:** Retrospective analysis over a period of 10 years. **Results:** Predialysis NYHA classification changed to 3.0 ± 0.7 to 1.1 ± 0.0 in HD, 3.3 ± 0.6 to 1.1 ± 0.4 in PD (all, $P=0.000$). Admission days due to pulmonary edema was reduced from 29.8 ± 24.1 days/patient/year to 1.1 ± 3.5 days/patient/year in PD (all, $P=0.000$). Mean survival rates of patients [HD, 43.23 ± 6.10 (43.30) months vs. PD 23.37 ± 3.59 (17.73) months, $p=0.0038$] and 1, 2, 5 years survival rates of HD were 76.4 %, 64.5% 34.2 % compared to 65.3 %, 35.6% 4.2 % of PD (Log rank test, $p=0.0038$). But, in multivariable analysis, Dilated cardiomyopathy compared to ischemic heart disease as underlying disease (HR 1.78, $p=0.107$), and NYHA score (HR 2.51, $p<0.001$) were significant factors associated with survival. But, dialysis modality (PD compared to HD) was not associated with survival. **Conclusions:** Dialysis treatment (PD, HD) for CRS was effective for life quality improvement and for life extension in some cases. But high mortality compared to general dialysis population. Dialysis modality had not affect survival differences. Heart disease type and function per se were the most important factors affecting long term survival.

	HD (N=36)			PD (N=55)		
	Pre	Post	p	Pre	Post	p
NYHA score	3.028 ± 0.7	1.1 ± 0.4	0.000	3.3 ± 0.6	1.1 ± 0.4	0.000
admission (days)	12.94 ± 9.1	2.6 ± 4.4	0.000	24.06 ± 17.5	1.26 ± 3.00	0.000
e - G F R (ml/min/1.73 m ²)	24.6 ± 28.8	34.2 ± 45.0	0.298	26.0 ± 18.3	34.6 ± 36.0	0.096
Hemoglobin (g/dL)	10.5 ± 2.8	11.0 ± 1.6	0.320	10.4 ± 2.2	11.6 ± 1.6	0.001

Table 1. Clinical variables changes after dialysis

	Hazard ratio	p-value
Age	1.01 (0.97-1.05)	0.689
Diabetes	1.05 (0.32-2.15)	0.867
Etiology (Ref: IHD)		
DCMP	2.81 (1.11-7.13)	0.030
VALVULAR HF	2.73 (0.74-10.07)	0.131
HCMP		
COR PULMONALAE	1.82 (0.21-15.97)	0.589
DIASTOLIC HF	1.24 (0.44-3.52)	0.679
Modality of PD (Ref: HD)	2.27 (0.99-5.19)	0.052

Table 2. hazard ratio

Each underlying heart disease's hazard ratio is compared to Ischemic heart disease
Modality of PD's hazard ratio is compared to HD

바이오마커를 통해 관찰한 IgA 신병증의 RAAS 차단제 사용 후 변화

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목적: IgA 신병증은 전 세계적으로 흔한 일차성 사구체 신염이며 20~25년 이후 약 15~40%의 환자가 말기신부전으로 진행한다고 알려져 있다. RAAS 차단제가 IgA 신병증 치료의 근간으로 본 연구에서는 바이오마커를 통해 RAAS 차단제와 콩팥내 변화를 보고자 한다. **대상 및 방법:** 조직 검사를 통해 IgA 신병증을 진단 받고 RAAS 차단제를 최소 1년이상 복용한 환자를 대상으로 하였다. 조직학적 MEST chronicity score를 측정하고, 소변의 angiotensinogen(AGT)과 coepectin, 혈장의 proadrenomedullin(proADM), 소변의 단백-크레아티닌 비(UPCR)를 두 시점 (진단, 치료 후)에 따라 비교 분석하였다. **결과:** 20명 환자에서 Chronicity score와 UPCR (528.53 ± 375.2 vs. 969.62 ± 710.3 vs. 1937.07 ± 1579.78 mg/g), 소변 coepectin (243.23 ± 54.3 vs. 514.51 ± 995.49 vs. 712.85 ± 1148.4 pg/ml)은 비례하였다. 소변의 AGT (113.36 ± 14.3 vs. 108.48 ± 4.8 vs. 111.89 ± 11.14 pg/ml)과 proADM (8.71 ± 6.95 vs. 5.53 ± 3.5 vs. 16.15 ± 7.21 pmol/ml)은 경향성을 보이지 않았다. 치료 전과 후에 있어 UPCR은 감소(1052.84 ± 964 vs. 565.29 ± 579.7 , $p=0.04$), Copeptin (486.36 ± 870.2 vs. 165.71 ± 99.8 pg/ml, $p=0.1$)과 proADM (8.45 ± 6.5 vs. 8.13 ± 6.9 pmol/ml, $p=0.72$)은 감소경향을 보이나 통계적 유의성은 없었다. AGT (110.38 ± 8.9 vs. 110.9 ± 6.1 pg/ml, $p=0.8$) **결론:** 본 연구에서 변화 없는 AGT에 대해서는 추가 연구가 필요하나 proADM의 RAAS에 대한 길항 작용 호르몬으로서의 경향성과 Copeptin의 콩팥 mass의 감소에 따른 농축 기능 변화에 따른 반응으로 생각할 때, RAAS 차단제 사용의 중요성과 변화를 간접적으로 보여주는 결과라 하겠다.

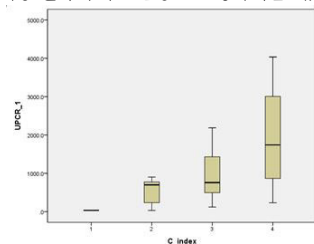


Fig 1. Comparison of chronicity score (index) and UPCR.

(UPCR: urine protein-creatinine ratio, C-index: Chronicity index).

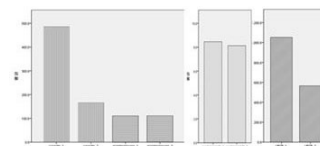


Fig 2. Comparisons of each variables before and after treatment with RAAS blockade.

(1: before treatment, 2: after treatment, UPCR: urine protein-creatinine ratio, RAAS: renin-angiotensin-aldosterone system).