Chronic kidney disease duration influences the renal graft outcome after living donor kidney transplantation. Myth or fact?

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Introduction

- Chronic kidney disease (CKD) is a condition associated with high morbidity and mortality. Kidney transplantation is known to improve quality of life, and probably also longevity, with grafts from living donors providing the best prognosis.
- There is some concern about the waiting time before transplantation, due to the accumulation of cardiovascular comorbidities associated with chronic renal failure and dialysis.
- The aim of our study was to evaluate the influence of CKD duration on the outcome of renal function in living donor kidney transplanted patients (LDKT)

Material and Methods

- Retrospective observational audit of electronic medical records of LDKT from January 2010 to December 2012.
- Main outcome: glomerular filtration rate (GFR) at hospital discharge, and 1st, 3rd, 6th, 12th and 24th month postoperatively.
- Statistical analysis using IBM SPSS Statistics v.21.
- Spearman correlation was used to assess the relation between CKD duration and GFR (significance level $p < 0.05$).

Results

Demographic Variables		
Values presented as %; Mean (maximum; minimum)		
	Donors	Recipients
Male (%)	23,9%	76,1%
Age (years)	46 (67; 20)	39 (70, 15)

Recipient Characterization	
Values presented as %, or Median (maximum; minimum)	
ASA physical status III / IV (%)	21,7 ; 78,3
High Blood Pressure (%)	78,3
Dyslipidaemia (%)	34,8
Smoking (%)	28,3
Diabetes Mellitus (%)	8,7
Preemptive LDKT	8.7%
CKD duration (months)	89 (312; 10)

CKD Duration : GFR

Time	SC Coefficient	p-Value
Discharge	-0.23	0.14
1 st month	-0.15	0.32
3 rd month	-0.18	0.23
6 th month	-0.22	0.16
12 th month	-0.25	0.10
24 th month	-0.19	0.23

A negative relation tendency was noticed, but there was no significant relation between duration of CKD and renal graft function evaluated as GFR at hospital discharge, or 1st, 3rd, 6th, 12th and 24th month postoperatively.

Conclusions

- Duration of CKD was not associated with an impact on renal graft function from living donors, until at least two years postoperatively.
- Prospective and controlled studies are necessary to better clarify the impact of CKD duration on renal graft function received from living donors.

References:

- Transplant Int 2014;27:19-27; Nephrol Dial Transplant (2015) 0: 1-7