

Peritoneal Dialysis drop-out in contemporary cohort: lower technique failure and higher transplantation rate



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INTRODUCTION

Up-dated peritoneal dialysis (PD) allows similar patient survival in comparison with hemodialysis (HD), however it still remains underutilized.

patient drop-out

lower technique survival

The aim of this study was to investigate the time course of PD outcomes, patient and technique survival taking into account access to renal transplantation (RT).

METHODS

Consecutive incident adult end-stage renal disease patients starting PD were identified from an ongoing registry-base prospective study of quality assessment.

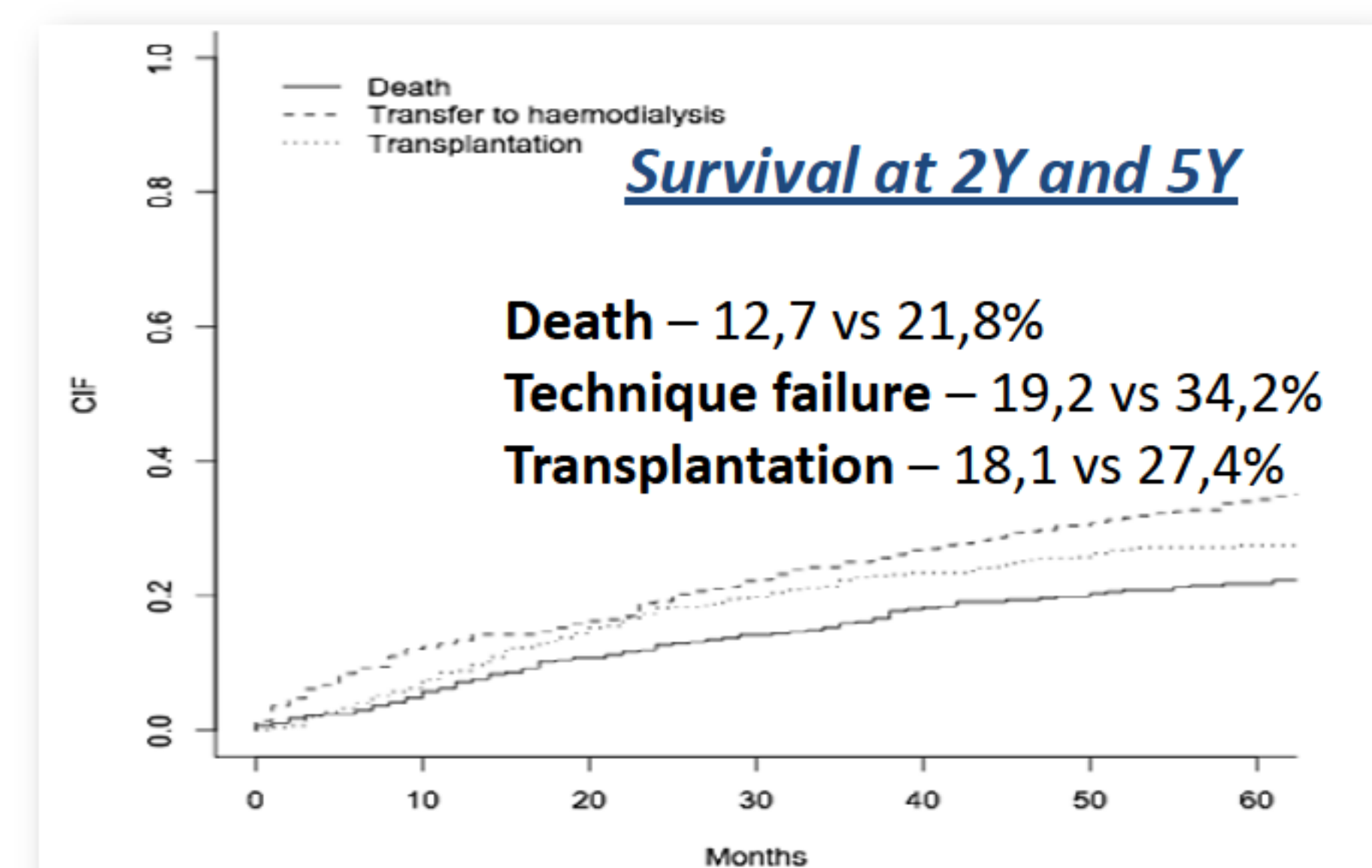
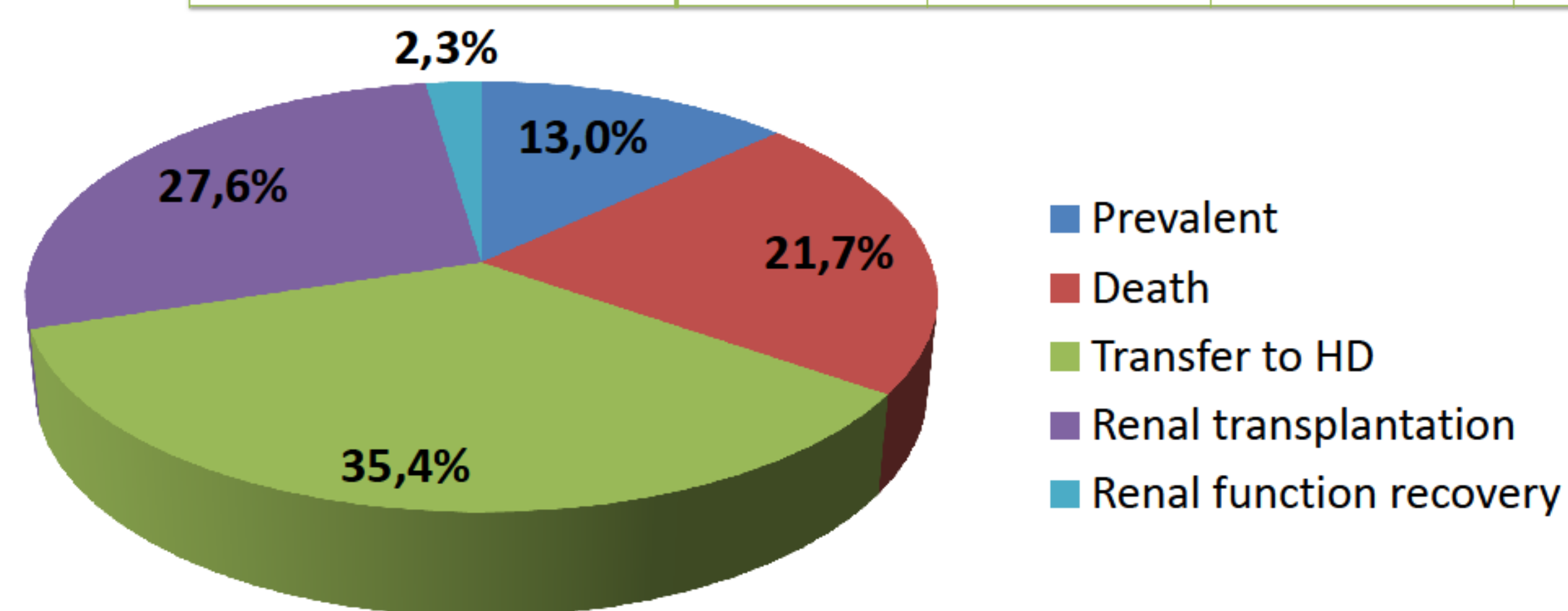
C 1	C 2	C 3	C 4	C 5	C 6	Demographics	Clinical variables	Technique modality
• 1985-1990	• 1991-1995	• 1996-2000	• 2001-2005	• 2006-2010	• 2011-2014			

Survival regression models taking competing risks into account were performed → identify potential prognostic factors for death and for transfer to HD (adjusted for age, gender, diabetes, cohort era, automated peritoneal dialysis (APD) use and first treatment modality - PD first, PD after HD, PD after renal transplant (RT)).

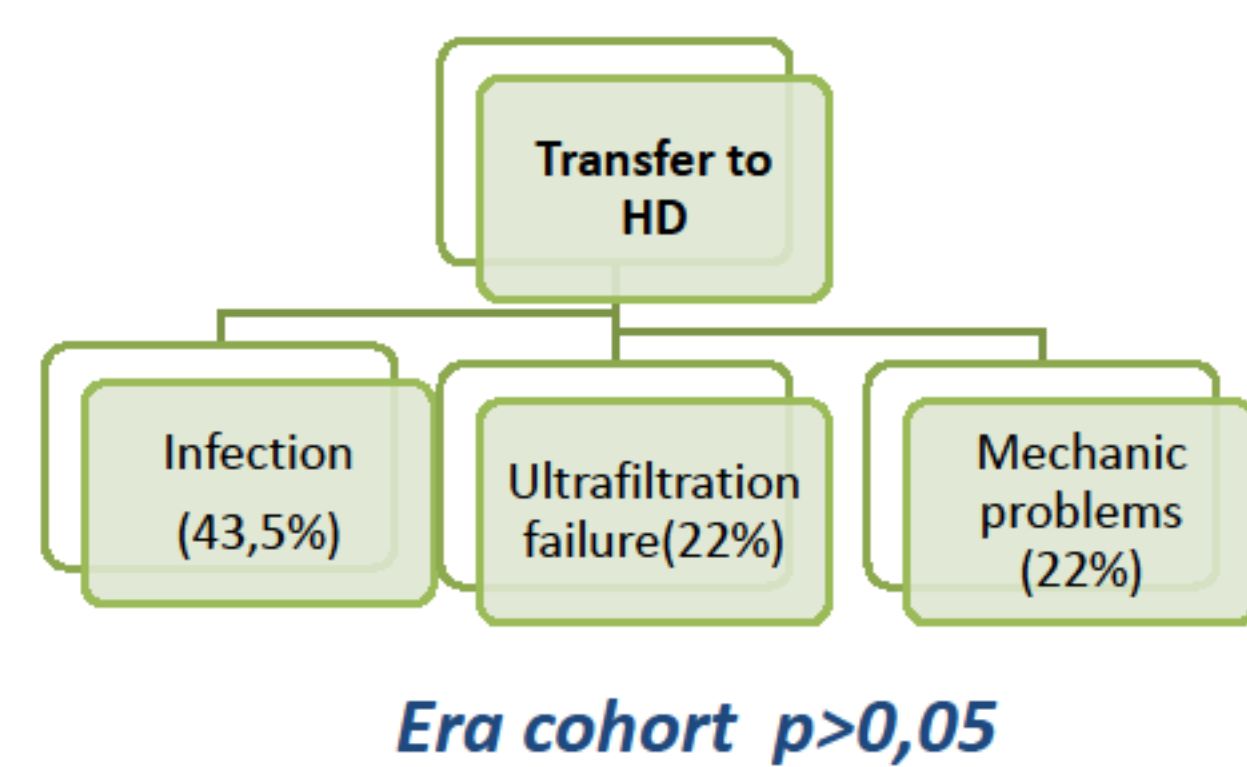
RESULTS

525 patients	n	%
Gender		
Male	211	40.2
Female	314	59.8
Technique		
APD	218	41.5
CAPD	307	58.5
First RRT		
DP first	296	56.4
HD	164	31.2
RT	65	12.4
Reason for PD		
Access failure	203	38.7
Others	322	61.3
CKD Etiology		
Diabetic nephropathy	76	14.5
Sistemic Disease	48	9.1
Chronic GN	121	23.1
ADPKD	36	6.9
Interstitial disease	39	7.4
Unknown	136	26.0
Other	68	13.0
Diabetes	120	22.9
HTA	352	67.0

	1985-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2014	P
APD							
No	35 (100)	77 (95.1)	66 (62.9)	47 (41.2)	39 (34.8)	43 (55.1)	<0.001
Yes	0 (0)	4 (4.9)	39 (37.1)	67 (58.8)	73 (65.2)	35 (44.9)	
First RRT							
DP first	23 (65.7)	44 (54.3)	56 (53.3)	60 (52.6)	59 (52.7)	54 (69.2)	0.005
HD	10 (28.6)	27 (33.3)	44 (41.9)	39 (34.2)	32 (28.6)	12 (15.4)	
RT	2 (5.7)	10 (12.3)	5 (4.8)	15 (13.2)	21 (18.8)	12 (15.4)	
Motif for DP							
Access failure	18 (51.4)	38 (46.9)	47 (44.8)	64 (56.1)	25 (22.3)	11 (14.1)	<0.001
Others	17 (48.6)	43 (53.1)	58 (55.2)	50 (43.9)	87 (77.7)	67 (85.9)	
Diabetes							
No	22 (62.9)	57 (70.4)	79 (75.2)	93 (81.6)	95 (84.8)	59 (75.6)	0.042
Yes	13 (37.1)	24 (29.6)	26 (24.8)	21 (18.4)	17 (15.2)	19 (24.4)	



Mean age at PD admission → 48 years (±15,7)
 Follow-up in PD (median time) → 23 months
 (P25 9 months P75 41.5 months)



Survival Analysis – competing risks (Fine & Gray model)

Cohort era	APD	First RRT	Reason for PD	Diabetes	Gender	Age
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Patient survival

Technique survival

Renal transplantation

- Age → poor in the oldest
- Diabetes → more risk of death
- Era cohort → lower risk in C6 (recent cohort)
- Recent cohort → lower transfer to HD
- Age → more transplantation in youngsters
- APD → lower transplantation rates
- Recent cohort → more renal transplant

CONCLUSIONS

Drop out due to technique failure decreased with contemporary PD, after adjustment for relevant clinical variables.

Access to renal transplantation is a competing event to include in survival analysis and a relevant factor to valorize in integrated patient care.

