

PERITONEAL DIALYSIS ABANDONMENT: PORTUGUESE REALITY

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Background

Despite the enormous developments in Peritoneal Dialysis (PD), this technique remains the least significant in the treatment of End Stage Renal Disease (ESRD) patients worldwide.

In 2013 patients on this modality represented only 6.3% of all the patients on Renal Replacement Therapies (RRT) in Portugal, despite a percentage growth, between 2007 and 2013, much higher than in Hemodialysis (HD) (41.6 % vs 21.5%).

Does this technique deserve a more relevant role in the treatment of kidney patients? Can we change the factors acting against better results of PD?

Aims

To compare the group of patients who drop-out Peritoneal Dialysis with the group that didn't, during 1 year.

To analyze PD drop-out reasons and its associated factors.

Population and Methods

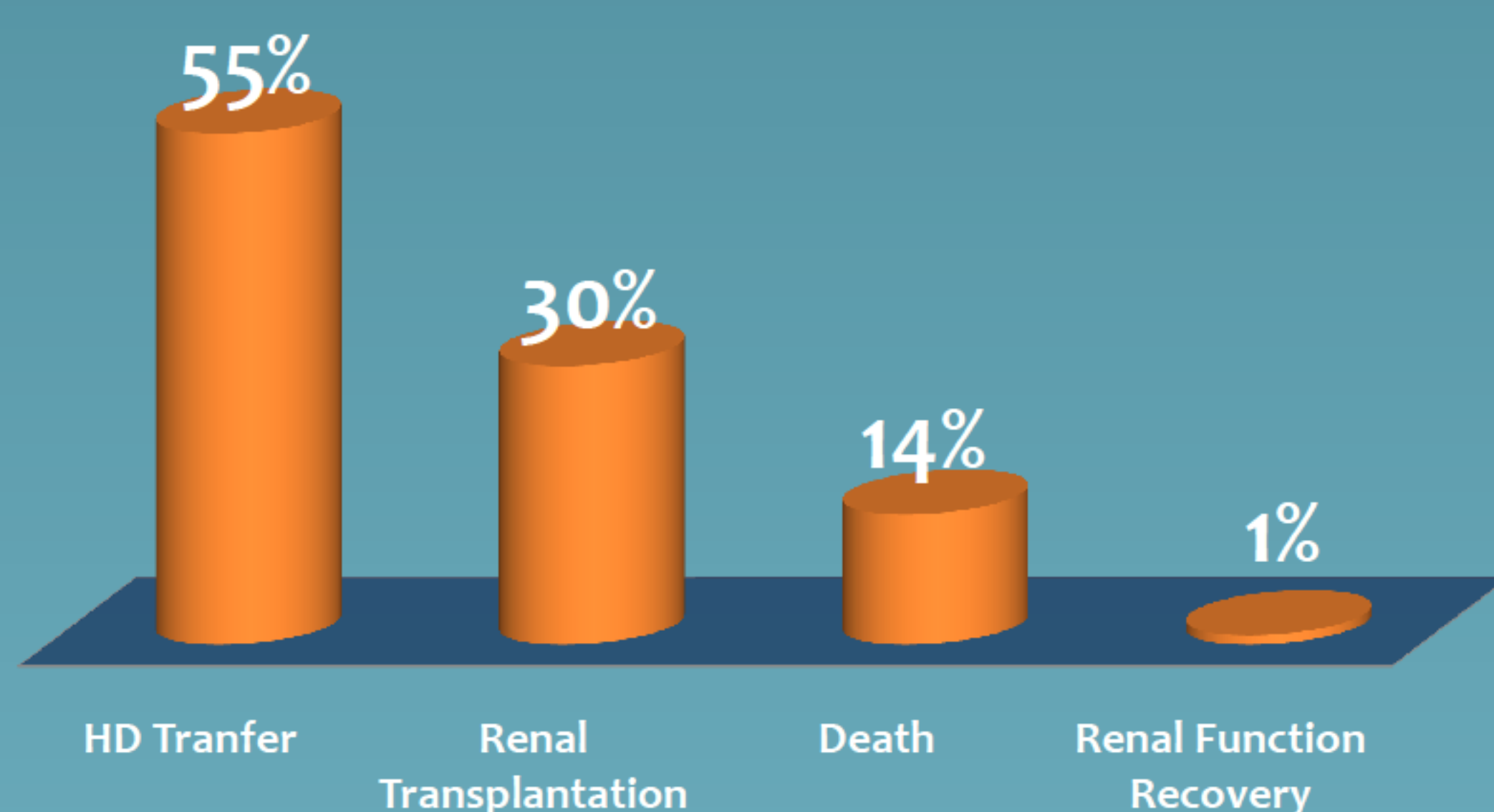
Observational study involving prevalent PD patients in 2013. Every PD unit was given a survey on the following topics: demographics, CKD etiology, comorbidities, start date of RRT and PD, prior RRT modality, reasons for PD option, PD modality, adequacy, type and volume of the solutions used, peritoneal transport, peritonitis and drop-out reasons.

We formed 2 groups: **Group 1:** patients who stopped PD in 2013 (excluding patients transferred to renal transplantation); **Group 2:** PD patients at 31/12/2013.

SPSS 20.0 (Chicago, Illinois, USA) was used for statistical analysis.

Results

Reasons for PD drop-out



Transfer to Hemodialysis

Technical failure	33%
Catheter related infections	29%
Catheter mechanical problems	9%
Non-compliance	9%
Option	6%
Others	14%

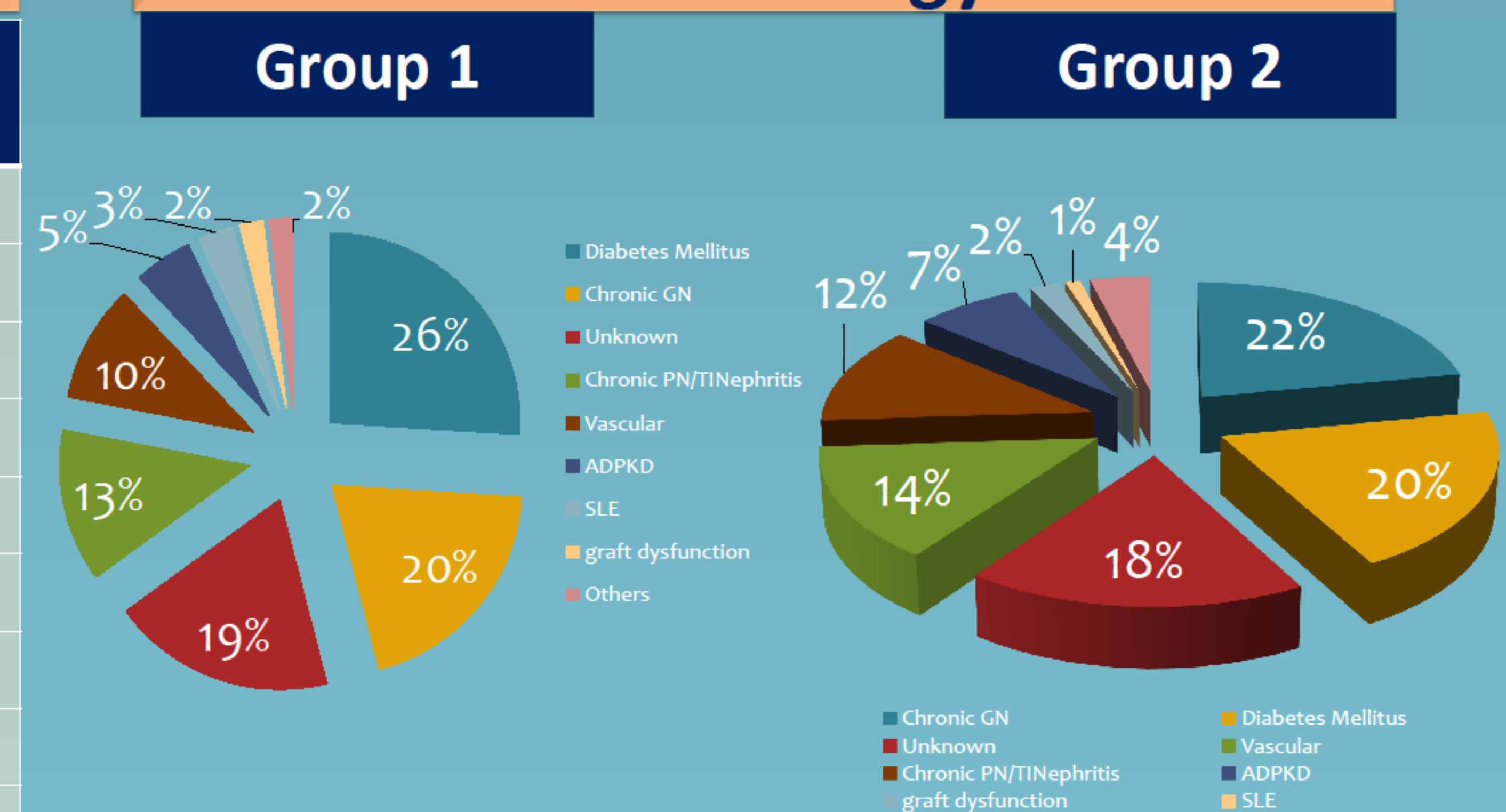
Causes of Death

Cardiovascular	53,1%
MIAD	15,6%
Infection	15,6%
Neoplasia	3,1%
Vascular/Peritoneal Access Failure	3,1%
Unknown	9,5%

Demographic data and PD related Parameters

Variable	Group 1 (n=149)	Group 2 (n=635)	p value
Age (median ± SD; years)	55,5 ± 16,7	54,7 ± 15,3	0,537
Male Gender (%)	61,1	58,9	0,634
RRT Vintage (median ± SD; years)	5,04 ± 5,73	3,88 ± 5,1	0,026
PD Vintage (median ± SD; years)	2,73 ± 2,14	2,38 ± 2,14	0,05
Anuria percentage (%)	28,2	13,8	< 0,01
Previous Hemodialysis treatment (% ; months)	38,1	24,1	< 0,01
Automated Peritoneal Dialysis (%)	52,8	46,1	0,105
Icodextrin use (%)	78,6	64,4	<0,01
Bicarbonate solutions (%)	88,1	81	0,043
Solutions volume (median ± SD; L/day)	10 ± 3,39	8,9 ± 3,09	<0,01
Adequacy			
Weekly kT/V urea	2,3 ± 0,61	2,1 ± 0,69	<0,01
Creatinin Clearance (L/week)	73,7 ± 34,4	87,3 ± 44,2	<0,01
Daily Total ultrafiltration – Diuresis + Peritoneal UF (median ± SD; L/day)	1,6 ± 1,3	2 ± 1,4	0,043
Peritoneal Transport (%)			
*Based on D/P creat T240 PET 3,86%	11,8	11,2	
Low	80,6	82,9	0,839
Average	7,5	5,9	
High			
Peritonitis since the beginning of modality (Peritonitis/patients.year) (median)	0,56	0,34	0,019
Peritonitis in 2013/patient (median)	1,34	0,82	0,002

CKD etiology



Comorbidities

Variable	Group 1	Group 2	p value
1 – Acute Myocardial Infarction	7,6%	10,3%	0,486
2 – Ischemic Cardiopathy	21,5%	15,9%	0,000
3 – Heart Failure	15,3%	15,4%	0,047
4 – Peripheral artery disease (Amputation)	4,9%	2,4%	0,025
5 - Stroke	7,6%	4,6%	0,013
6 - Demencia	4,2%	1,4%	0,011
7 - COPD	4,2%	5,7%	0,462
8 – Diabetes Mellitus	21,5%	26,5%	0,124
9 – Chronic Hepatic Disease	3,5%	1,6%	0,049
10 – Neoplasia	4,2%	5,1%	0,382
	1,4%	5,7%	0,129

Conclusion

The majority of patients in Group I was transferred to HD, mainly because of peritoneal membrane failure or infection. The "typical patient" who abandoned the technique in 2013 had more time of RRT and PD; was more frequently on HD previously and was transferred to PD because of vascular access problems; was more frequently anuric; had worse adequacy parameters (although treated with higher volume of solutions, with icodextrin and with bicarbonate solutions), had more peritonitis episodes and cardiovascular co morbidities.

