

# Peritoneal Dialysis Drop-out: Lessons from a Portuguese cohort

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## Introduction and Aims:

Despite the well defined place of Peritoneal Dialysis(PD) in the integrated treatment of End Stage Kidney Disease (ESKD), this modality has remained as “secondary” among Renal Replacement Therapies (RRT). The high rate of patient drop-out is probably one of the most important reasons (about 25% per year) for this fact, mainly due to technical failure.

The purpose of this study was to investigate the reasons for PD discontinuation in a Portuguese population and to identify the associated factors.

## Material and Methods:

Multicenter and retrospective study involving 911 adult patients from 18 PD units, in 2013.

Each center used a worksheet to report details about patients who left PD during the year 2013. Data collected: demographic, modality of PD, chronic kidney disease (CKD) etiology, co-morbidities, PD and RRT vintages, first modality of RRT, reasons for PD drop-out, adequacy indexes, peritoneal membrane transport characteristics and number of previous peritonitis episodes. Statistical analysis using ANOVA and T-student for continuous and chi-square for nominal variables.

## Results:

**234 patients quit PD** (2 patients recovered renal function – 0,8%)

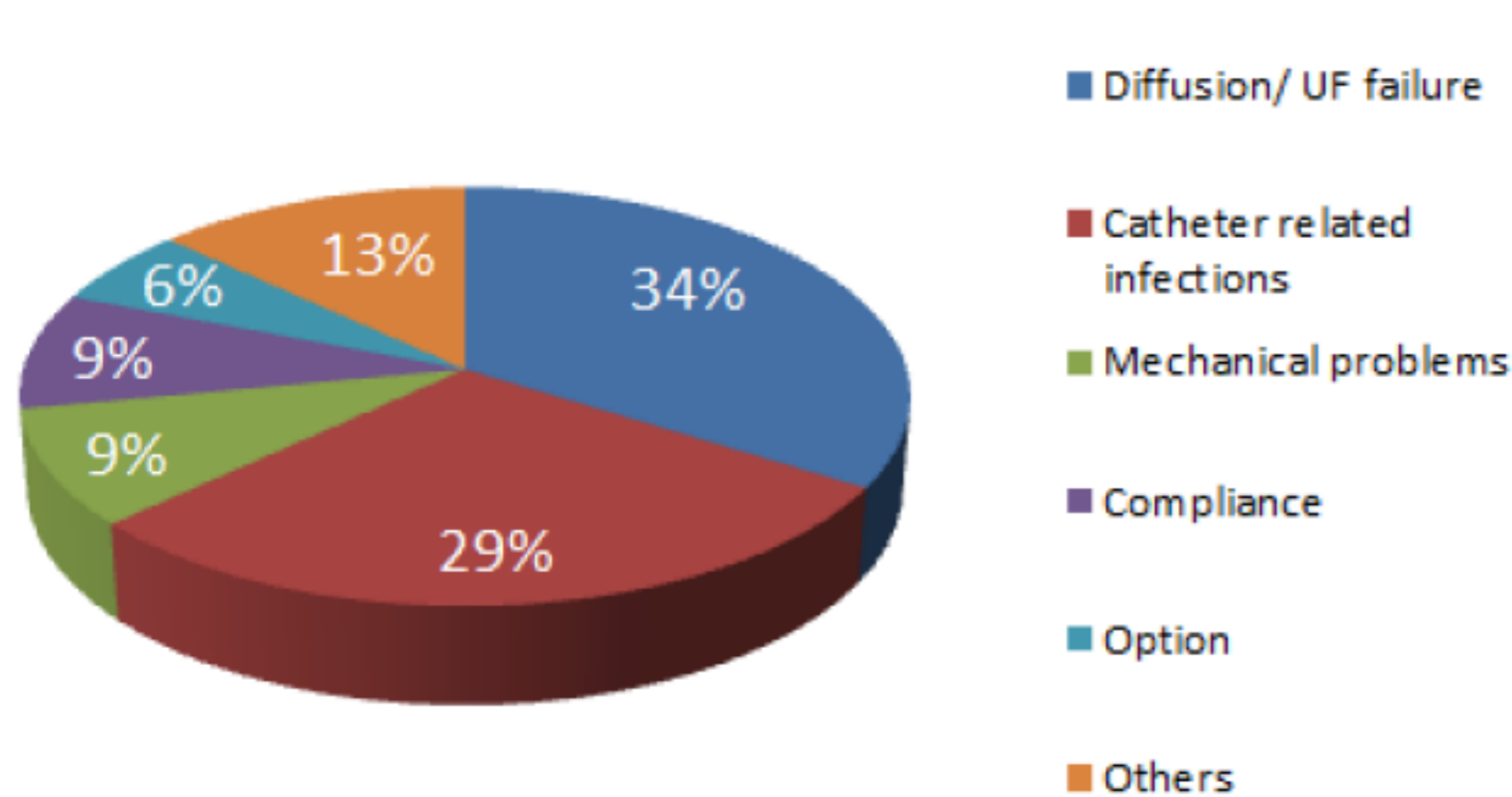
**Renal Transplantation**  
(n=72/30.8%)

**Hemodialysis**  
(n=128/54.7%)

**Death**  
(n=72/13.7%)

Demographics				p value
Age (years)	43.8 ± 11.8	52.9 ± 15.8	67.8 ± 10.5	p=0.000
Male gender (%)	44.4	60.2	59.2	p=0.090
RRT vintage (years)	3.15 ± 3.07	4.81 ± 5.89	4.96 ± 3.77	p=0.143
PD vintage (years)	2.54 ± 1.77	2.44 ± 2.02	3.25 ± 2.66	p=0.445
<b>First Modality of RRT</b>				
HD(%)	77	64.3	55.6	p=0.102
PD(%)	21.3	34.7	44.4	
<b>Reason for PD</b>				
Option	90.2	83	66.7	p=0.077
Vascular access	9.8	16.1	29.6	
Other	0	0.9	3.7	
<b>CKD etiology</b>				
Chronic GN	41.7	28.9	9.3	p=0.001
Diabetic Nephropathy	13.9	18	50	
Chronic PN	11.1	13.3	12.5	
Unknown	15.3	20.3	12.5	
<b>Comorbidities</b>				
Ischemic cardiopathy	1.6	17	44.4	p=0.000
Cerebrovascular disease	4.9	6.2	18.5	p=0.062
Heart failure	1.6	12.5	29.6	p=0.001
Diabetes	14.8	18.8	52.1	p=0.001
<b>PD related Parameters</b>				
Automatized PD	62.3	53.6	40.7	p=0.166
Icodextrin	47.5	72.3	63	p=0.005
Bicarbonate based solutions	73.8	87.5	77.8	p=0.067
Daily PD volume (L)	9.51 ± 8.68	10.22 ± 3.54	8.74 ± 2.78	p=0.088
<b>Adequacy</b>				
Weekly kT/V urea	2.34 ± 0.534	2.05 ± 0.66	2.14 ± 0.68	p=0.064
Creat Clearance (L/week)	79.6 ± 36.7	74.1 ± 34	79.5 ± 33.6	p=0.675
Daily total UF (pert + renal – mL)	2134 ± 1026	1643 ± 790	1809 ± 906	p=0.020
Anuric (%)	17.9	25	44	p=0.044
<b>Creat D/P (240 min)</b>				
Low	14.6	7.1	21.4	p=0.190
Average	72.9	75.3	52.6	
High	12.5	17.6	26.3	
Peritonitis since the begining of modality	0.77 ± 1.26	1.48 ± 1.74	0.88 ± 1.05	p=0.010

## Causes of HD Transfer



## Conclusion:

This multicenter study demonstrate that despite the large number of patients submitted to renal transplantation during PD, the majority of patients leave PD to HD. Causes are mainly PD catheter infections and technique related (either ultrafiltration and/or diffusion failure).

To prolong PD treatment caregivers should focus their attention in the application of strategies to preserve peritoneal membrane and to prevent/timely treat catheter-related infections.

## Causes of Death

