

Delivered and prescribed APD treatments: Does differences matter?. A multicenter study

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Background: Our collaborative GCDP-group join 23 PD public Hospitals since 2003 with more than 2.000 patients under PD. About one third of our PD patients (31%) started with an automatic peritoneal dialysis (APD) prescription. We use several prescription softwares and memory cards to get and save the results of the treatment. This allows us an almost perfect control of treatment, compliance and results for every patient.

Methods: A pilot multicenter prospective cohort study over all ESRD patients under APD (n: 106) for more than 1 year. Data from our clinical data base (GCDP) joined with APD-prescription and treatment control softwares. We have integrated data from prescription software with our clinical database and we have analysed the daily prescriptions and real delivered treatments. The main basal and 1st year results are depicted in table 1.

Cohort:

57.9% male
Mean age 54.37 years (SD 11.3)
Previous treatment: 52.6% HD
10.5% TX

Comorbidity

27.8% DM
Charlson 2.7 (SD 1.1)
Charlson+ age 5.0 (SD 1.6)

Nephropathy:

31.6% Glom
26.3% Interstitial
15.8% DM
10.5% NAE
5.3% APKD

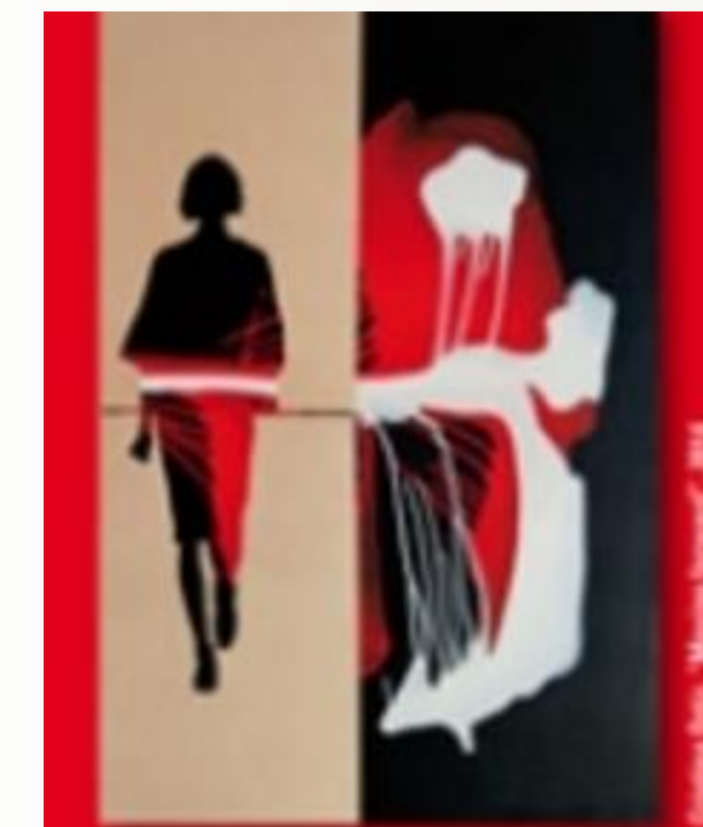
At the end of study

26.3% transfer to HD
26.3% transfer to TX
5.3% recovery RRF
5.3% lost follow-up
36.8% on peritoneal dialysis

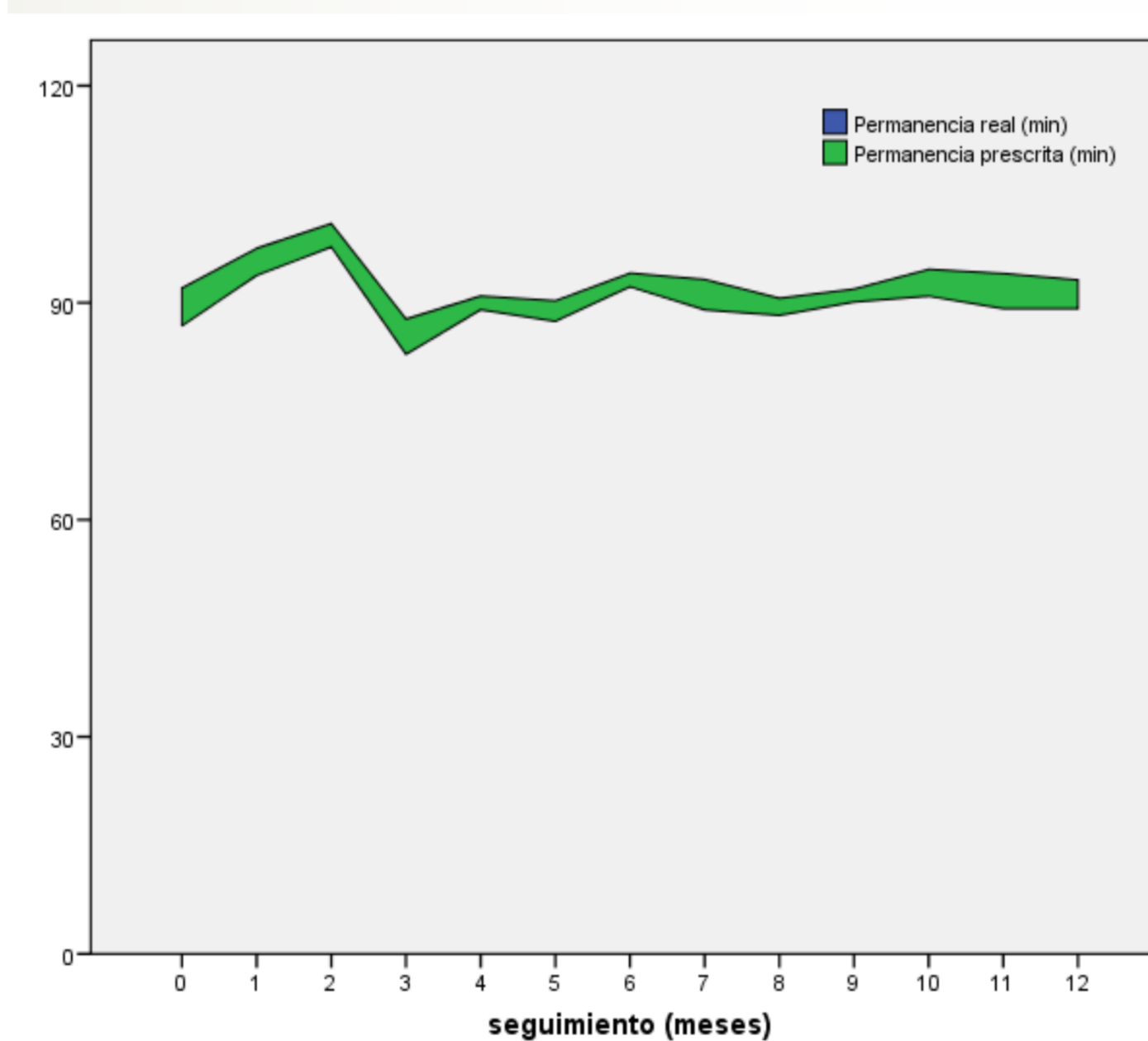
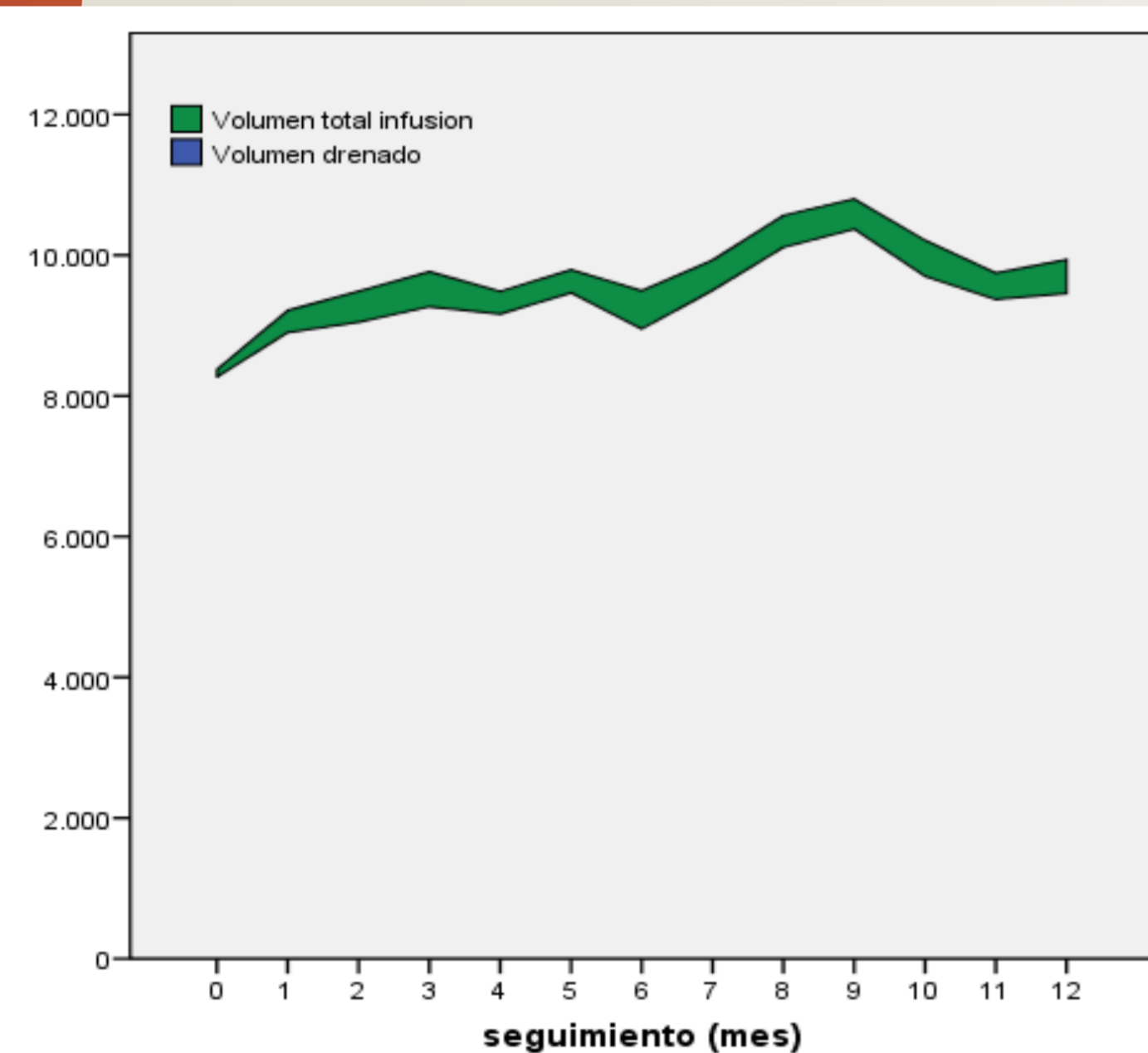
	Basal	At 1st year
% dry day APD	5%	5%
Kt/V	2.5 (0.9)	2.3 (0.8)
CrCl (l/week)	111.2 (43.7)	75.5 (38.8)
RRF (ml/min)	5.3 (4.5)	3.2 (2.8)
% Higher transporter (D/P creatinine >0.8)	13.3	7.1

The prescribed permanence time is 75% of the treatment time, and only 71% of the real time of the treatment.

The time prescribed at the beginning is very similar to what the patient actually realized (8.0 vs 7.9 h), while at one year, the time they are with the cyclor is close to 9 h (8:54) The prescribed treatment was less than 8:30 h.



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Real delivered treatment increased significantly (> 30 min) in 15% of days. More than 25% of prescribed time is used for infusion and drainage and this time increased up to 29.5% in real delivered treatment. Total delivered time increased by 1 hour after 1st year (24 min due to prescription and rest due to slow catheter flux, incidences or alarms). The distribution is inhomogeneous, since 26,3% of patients accounts for more than 50% of prolonged treatments.

	BASAL	At 1st year
Total fill volumen (ml)	8837,6 (3139.9)	10336,0 (4530.8)
Prescribed fill volumen (ml)	1873,7 (284,5)	1978,6 (452,6)
Real fill volumen (ml)	1853,8 (284,0)	1965,2 (457,8)
Prescribed Last fill volumen (ml)	912,8 (740,7)	1534,6 (679,9)
Real last fill volumen (ml)	879,8 (706,9)	1500,3 (660,5)
Prescribed total time (h)	8,0(0,7)	8,4 (1,3)
Real total time (h)	7,9 (2,0)	8,9 (1,5)
Δ (Real Time- Presc Time) min	-2,0	28,7
Presc delivered time (min)	89,4	91,1
Real delivered time (min)	83,2 (19,2)	87,7(23.6)
% Real delivered time vs prescribed	95.7%	96,9%
Prescribed UF	439,5(285,0)	216,7 (247.5)
Real UF	201,9 (265,2)	370,9 (458,1)

Conclusions: We start peritoneal dialysis with APD when we foresee a rapid renal function loss or a need for higher doses. The differences between prescribed and delivered treatments may have an impact in the live of patients and should be considered for guidelines, protocols and professional training and applied to daily clinical practice.



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