

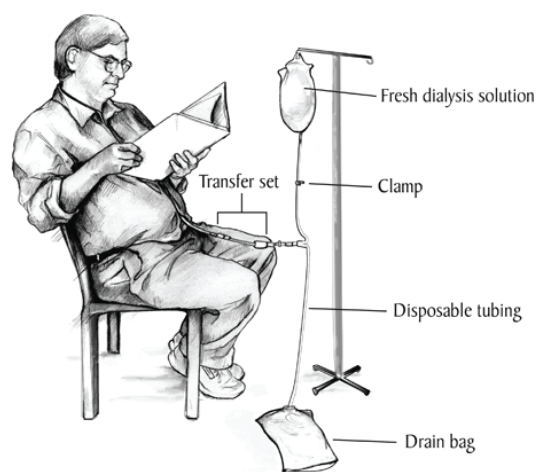


Change of estimated GFR and residual urine volume in chronic peritoneal dialysis program

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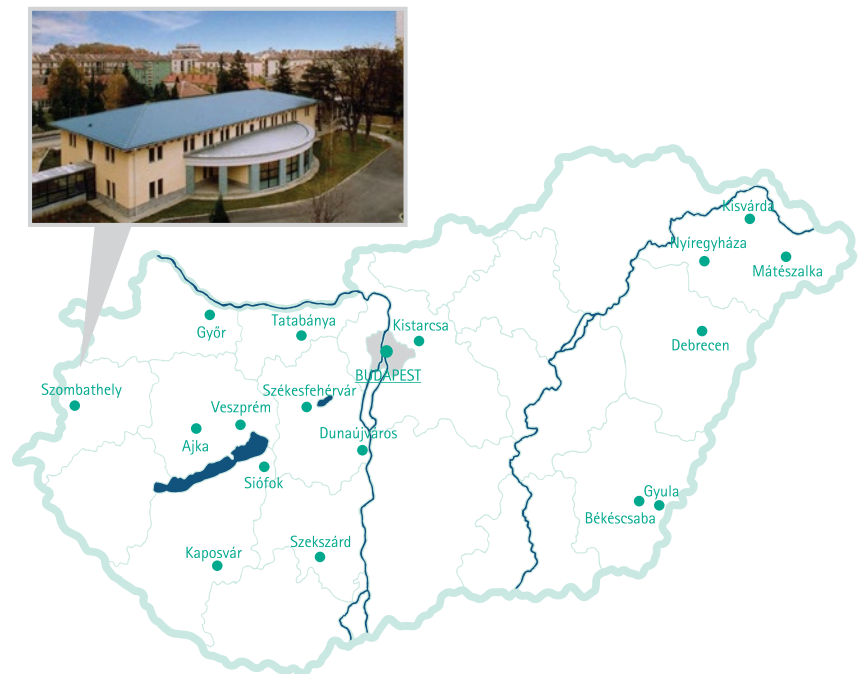
Introduction

Peritoneal dialysis treatment (PD) is recommended for patients with residual renal function

- Before 2010 an early start was recommended (eGFR 15-20 mL/min/1.73m²)
- Currently the start of the treatment is at 10-15 mL/min/1.73m²

Patient and methods

In our dialysis centre in the past 6 years (2009-2014) 105 patients were enrolled into the PD program (53 female, 52 male). We studied the diuresis, the eGFR (MDRD formula) changes in the groups of patients monitored for the technique survival. The study ended at the end of 2014.



Average age of patients	62.9 years	[18-83 years]
Average time spent in PD	1.9±0.9 years	
< 1 year	34 pts	(32.4 %)
> 3 years	25 pts	(67.6 %)
1-3 years	46 pts	

Aim of the study: observe the changes of the estimated GFR and daily diuresis in relation to the period of time spent in PD

At the end of the observation:

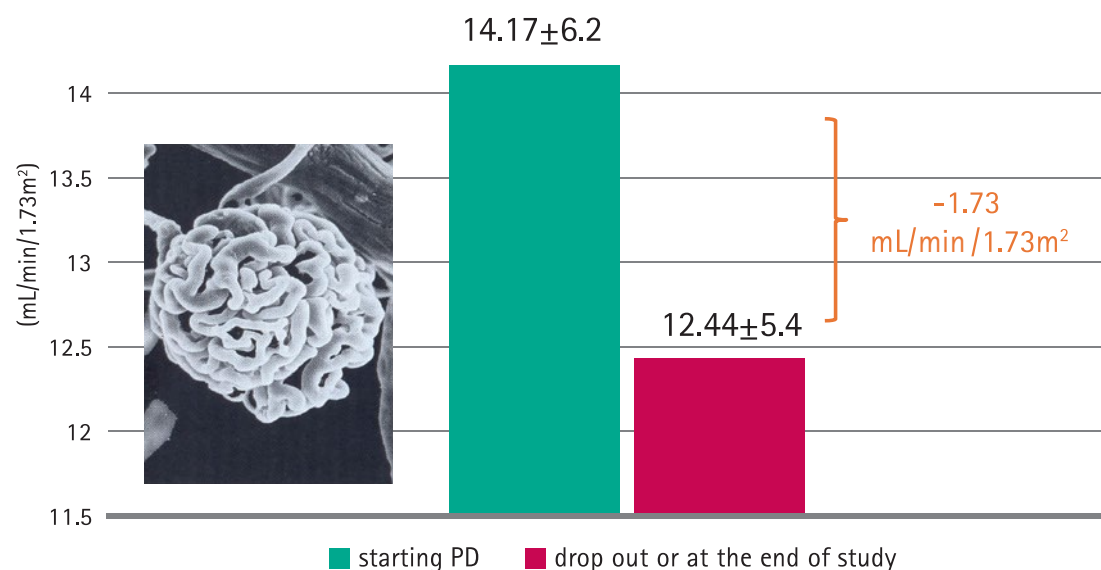
• was still in PD	45 pts (42.8%)	average 825 days	[135-2015 days]
• dropped out	60 pts (57.2%)	average 529 days	[110-1686 days]
		recovery on renal function	8 pts
		transplantation	8 pts
		modality change (HD)	21 pts
		exitus	23 pts

Results

- The average age of patients at the beginning of PD was 62.9 years.
- The average time spent in PD was 1.9 years. At the end of the observation 45 patients were still in PD (average time 2.3 years), 60 patients dropped out (after 1.5 years in average): because of improved renal function 8, because of transplantation 8, because of exitus 23 patients were lost, 21 patients switched to haemodialysis (HD). The average eGFR was 14.2 mL/min at the beginning of PD, at the end of the observation it was 12.4 mL/min: 65.7% of patients had reduced value, 34.3 % of them had stable or increased value.
- The average daily diuresis was 2080 mL at the beginning of the observation, at the end of the period it was 1670 mL. Average diuresis decreased in 64.7% of patients. GFR level decreased by 0.9 mL/min yearly, diuresis was decreased by 213 mL/year. The most expressed reduction was observed in patients transferred to HD program (GFR: -2.52 mL/min/year, diuresis: -409 mL/year).

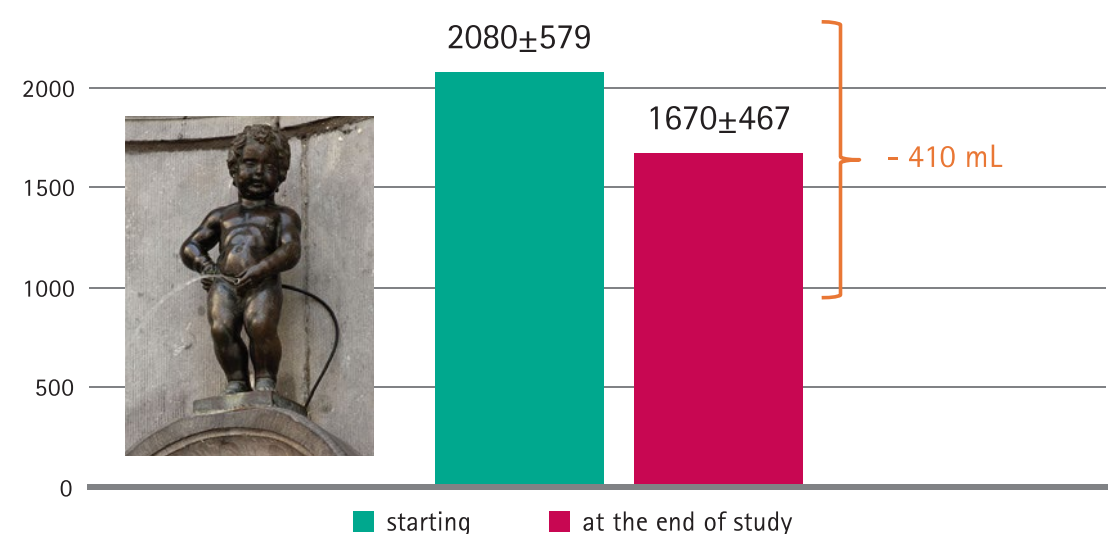
Outcome of patients		eGFR (mL/min/1.73m ²)		24 ^h urine (mL/day)		average follow up period (year)
		at start	at the end	at start	at the end	
currently on PD	45	14.02	12.28	2.06	1.79	2.26
dropped out	60	11.71	12.14	2.02	1.56	1.45
- recovery of renal function	8	15.60	18.90	2.68	2.10	1.02
- transplantation	8	10.10	10.75	2.34	1.81	1.58
- switched to HD	21	9.73	7.42	1.73	1.33	1.50
- exitus	23	12.73	11.56	1.81	1.39	1.81

Changes in eGFR



eGFR (mL/min/1.73m ²) changes	pts	(%)	mean±SD	survival
decreased	69 pts	(65.7%)	-5.6±3.8	2.4±1.4 years
unchanged	10 pts	(9.5%)		1.8±0.6 years
increased	26 pts	(24.8%)	+6.5±5.8	1.6±0.9 years
average eGFR change/year:			-0.9±0.3	
patients switched to HD:			-2.5±0.9	
dead pts:			-0.8±0.4	
transplanted pts:			+0.5±0.2	

Changes in diuresis (mL/day)



Diuresis (mL/year) changes	pts	(%)	mean±SD	survival
decreased	68 pts	(64.7%)	-0.8±0.6	1.9±1.3 years
unchanged	13 pts	(12.4%)		1.8±1.5 years
increased	24 pts	(22.96%)	+0.6±0.5	1.9±1.3 years
average diuresis change/year:			-213±70	
patients switched to HD:			-409±160	
dead pts:			-232±120	
transplanted pts:			-190±160	

Conclusion

The GFR and residual diuresis of patients in peritoneal dialysis program decreased only moderately during this short observation period except in case of those patients, who entered into HD program by necessity.