Frail Elderly Patient Outcomes on Dialysis (FEPOD): A Cross-Sectional Comparison of Assisted Peritoneal Dialysis and Haemodialysis

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OBJECTIVES

Determine outcomes of patients on assisted PD compared to hospital HD for frail and older patients

- Quality of life
- Physical function
- Impact of treatment
- Healthcare use

METHODS

- Assisted PD defined as unable to do PD unless assisted by family or paid healthcare worker
- Assisted HD defined as hospital HD requiring hospital-supplied transport
- Assisted PD patients matched to assisted HD patients by gender, age, diabetes status, time on dialysis, ethnicity, index of deprivation by postcode

Unadjusted Quality of Life Measures

Quality of life assessment	APD	HD	Multiplicity Adjusted P value
SF-12 PCS§, median (IQR)	33.0 (14.4)	31.4 (12.9)	0.8252
SF-12 MCS§, median (IQR)	45.0 (12.9)	49.3 (14.2)	0.3269
Illness intrusiveness scale, median (IQR)	38.5 (17.7)	36.7 (17.8)	0.8458
Renal Treatment Satisfaction Score, median(IQR)	53.5 (13)	51.5 (14)	0.9280
HADS: depression, median (IQR)	7 (6)	5 (4)	0.1085
HADS: prevalence of possible depression	43.4%	21.2%	0.1127

Patient Characteristics

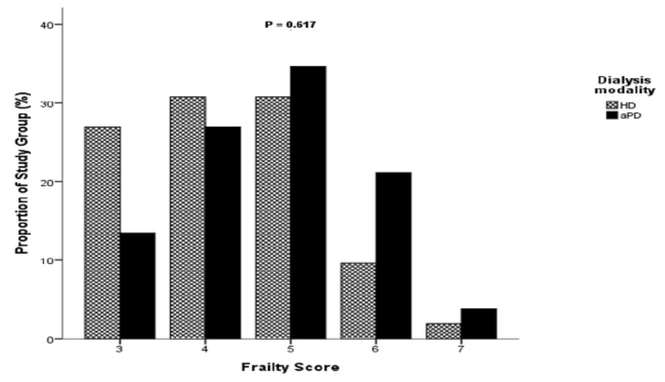
	aPD (n=54)	HD n=52)
Mean age (years) (SD)	74.1 (7.62)	74.1 (7.85)
Male (% of n)	59.3%	61.5%
Ethnicity (% of n)		
White European	69.8%	71.7%
Afro-Caribbean	11.3%	15.1%
Asian	18.9%	7.5%
Other	0.0	6.7%
Median time on dialysis (IQR) months	22 (23)	18 (21)
Median Index of Deprivation* (IQR)	16.78(21.7)	19.74(23.1)
Diabetes	50.0%	51.9%
Median Stoke Comorbidity Score (IQR)	2 (2)	2 (1)

Assessment Tools	Measures
Quality of life	SF-12 Illness Intrusiveness Depression (HADS) Symptoms (POS-S – Renal) Satisfaction with treatment (RTSQ)
Cognitive function	MMSe Trail making test B
Physical function	Barthel score Timed up and go Falls questionnaire Frailty assessment
Social Support	Social support questionnaire
Healthcare use	Healthcare use questionnaire

HADS >8; possible depression. Logistic regression

Effect	DF	Wald Chi-Square	Pr >ChiSq	Multiplicity Adjusted P value
Age	1	0.015	0.901	0.986
Gender	1	0.034	0.854	0.967
Dialysis vintage	1	0.531	0.466	0.802
MMSE	1	2.318	0.128	0.442
Comorbidity	1	2.655	0.103	0.394
Frailty	1	0.773	0.379	0.718
Symptom score	1	9.822	0.002	0.023
Dialysis modality	1	2.232	0.135	0.442

Distribution of frailty scores



Multivariate analysis using a generalised linear regression model

Multiplicity Adjusted P value	Age	Gender	Dialysis vintage	MMSE	Stoke co-morbidity score	Frailty score	Dialysis modality
SF12 total	0.918	0.928	0.986	0.928	0.617	**0.022**	1.00
SF12 PCS	0.959	0.802	0.819	0.785	0.801	**0.002**	0.921
SF12 MCS	0.973	0.957	0.831	0.916	0.831	0.172	0.935
Illness Intrusion	0.137	0.725	0.840	0.894	0.424	0.389	0.973
Symptom score	0.959	0.916	0.845	0.508	0.560	0.265	0.154
HADS score	0.387	0.928	0.916	0.718	0.785	0.442	0.244
Barthel score	0.928	0.957	0.839	0.831	0.644	**0.003**	0.840
Timed Up and Go	**0.013**	0.701	0.154	0.246	**0.009**	**0.003**	0.718

RESULTS

- Assisted PD patients successfully matched to HD by age, gender, ethnicity, dialysis vintage, comorbidity index of deprivation
- Frailty is the most influential variable on measures of quality of life (SF12) and physical function (SF12 PCS, Timed Up and Go, Barthel)
- Depression common (possible depression in 32% total group); related to symptom score
- No effect of dialysis modality on outcomes

CONCLUSIONS

- Dialysis – aPD or HD - does not alleviate the impact of frailty. This should be discussed with patients and indications for dialysis should be limited to uraemic symptoms and complications
- Patients should be free to choose which type of dialysis modality – aPD or HD – or possibly no dialysis
- Pathways for assisted PD – education and availability – should be more readily available

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