

HYBRID DIALYSIS IS A VIABLE OPTION TO EXTEND PERITONEAL DIALYSIS TECHNIQUE SURVIVAL

M Law¹, J Bone¹, M Harvey¹, A Daffey¹, AM Desai¹, J Englezos¹, LP McMahon^{1,2}, LL Huang^{1,2}

¹ Eastern Health Integrated Renal Service, Eastern Health, Victoria

² Eastern Health Clinical School, Monash University, Victoria

Introduction

Hybrid dialysis by adding weekly haemodialysis (HD) to peritoneal dialysis (PD) may be a suitable strategy to improve solute and fluid clearance whilst keeping patients home to maintain quality of life. There is limited reporting of the use of hybrid dialysis in Australia.

Method

This is a retrospective review of a single-centre approach to identifying PD patients with inadequate therapy (total CrCl <70 L/week, or Kt/V <1.7 and symptomatic) and the multidisciplinary support to extend PD technique survival. Baseline assessments of symptoms using POS-S Renal, DASS21 and PHQ9, NSQOL and MIS instruments were performed by PD nurses, social worker, psychologist and dieticians.

Results

Thirteen patients were assessed as suitable for hybrid dialysis. Table 1 describes patient characteristics prior to commencement. Median time on PD prior to modality switch was 34 [23-42] months. Most common indication was inadequate solute clearance (92%) at maximal PD prescription rather than ultrafiltration failure. Eleven patients have extended PD technique survival by at least 6 [range 1-24] months.

The most common burdensome symptoms reported on the POS-S Renal (n=10) were "weakness" (40%), "drowsiness" (50%), "itch" (60%), "difficulty sleeping" (50%) and restless legs (40%). POS-S Renal scores were stable after commencement of hybrid dialysis.

Depressive symptoms were common with 57-71% of patient meeting DASS21 and PHQ9 criteria for moderate major depression.

Table 1. Baseline characteristics (n=13)

Age	66 [59-73]
Males (%)	8 (62%)
CrCl (L/week)	60.4 [56.6-62.9]
Dialysate	40.7 [36.2-43.6]
Residual	19.6 [12.4-23.8]
Kt/V	1.9 [1.7-2.1]
Dialysate	1.5 [1.2-1.6]
Residual	0.39 [0.2-0.6]
Urea (mmol/L)	22 [18-25]
Creatinine (mmol/L)	805 [744-1048]
Albumin (g/L)	29 [27-34]
24hr urine output (L)	607 [500-908]
Time on PD prior to hybrid dialysis (months)	34 [23-42]
POS-S Renal score	13 [7-19]*
DASS21	
Depression	4/7 (57%)*
Anxiety	3/7 (43%)*
Stress	2/7 (29%)*
PHQ9 for depression	5/7 (71%)*

CrCl, Creatinine-Clearance; POS-S Renal, Patient-Outcome-Scale Renal; DASS21, Depression Anxiety Stress Scales; PHQ9, Patient Health Questionnaire 9. *Incomplete data.

Nine patients started hybrid dialysis using an arteriovenous fistula (AVF). Two patients had AVFs created but received kidney transplantation before commencement of HD.

Four patients made a modality switch to haemodialysis alone due to peritonitis or inadequate solute clearance. One patient withdrew from dialysis. Two patients received kidney transplantation within 8 months. Four patients remain on hybrid dialysis with three active on deceased-donor-waitlist and one having extended technique survival by 24 months.

Conclusion

Hybrid dialysis is suitable in select patients to improve dialysis adequacy and maintain quality of life whilst extending PD technique survival.

Correspondence: Dr Louis Huang,
louis.huang@monash.edu