

DIALYSIS. EPIDEMIOLOGY, OUTCOME RESEARCH, HEALTH SERVICES RESEARCH - 1

SP597

FAVOURABLE BIOCHEMICAL OUTCOMES OF FREQUENT HEMODIALYSIS AT HOME USING THE NXSTAGE® SYSTEM ONE™ - THE EUROPEAN EXPERIENCE

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Introduction and Aims: The NxStage System One (NSO) was launched in its first European market in 2009. This novel machine, which was specifically designed for the home environment, has facilitated adoption of home hemodialysis (HHD). Here, we present the experience of more frequent Home Hemodialysis using the NSO with an optimised usage of dialysate volumes.

Methods: The methodology was retrospective data collection for 127 patients in 7 centers across 4 European countries (UK, France, Italy and Spain).

Results: The demographics of the HHD population are mean age 49.6 years (SD 13.5); 61% male; and mean BMI 26.4 (Range 13.3 to 50.8). The mean Charlson Comorbidity Score was 3.6 (Range 0 to 11) and 9.4% had diabetes causing renal failure. Access type was distributed as 76.4% AVF, 20.5% CVC, and 3.1% PTFE; and 74% of those with a

fistula used the button hole technique for cannulation. Patients were all on frequent dialysis at home, with 27.6% on 5 sessions per week and 70.1% on 6 or more sessions per week, for a mean of 14.8 hours of dialysis per week. The majority of patients used between 20 and 30 liters of dialysate per session. 66.1% of patients were previously on conventional HD, 8.7% on peritoneal dialysis, 5.5% on frequent HD, 2.4% failed transplant and 17.3% pre dialysis. Training time is short with a mean of 16.9 sessions to become independent at home. Regarding previous modality, 66.1%, 5.5%, and 8.7% were on conventional HD, frequent HD, and peritoneal dialysis, respectively; 2.4% returned after transplant failure; and 17.3% were new to dialysis. Training time was short, with a mean of 16.9 sessions to become independent at home. Laboratory parameters have been favourable and are shown in the table below. Many patients have achieved a reduction in pill burden and one third of patients were on no anticoagulant or a reduced dose at 6 months.

Conclusions: In conclusion, short and frequent hemodialysis at home using the NSO has proven to be an excellent therapy for this patient population with short training times, good biochemical outcomes and a reduction in medication burden.

SP597 Table 1: Laboratory parameters of 127 patients observed in 7 centers across 4 European countries

	Baseline Mean (SD)	3 Months Mean (SD)	6 Months Mean (SD)
Std Kt/V	2.1 (0.66)	2.5 (0.4)	2.5 (0.5)
Albumin (g/L)	37.1 (5.3)	37.5 (4.0)	37.9 (7.6)
Beta-2-microglobuline (mg/L)	22.6 (9.0)	27.2 (11.9)	25.9 (10.1)
Calcium (mmol/L)	2.29 (0.19)	2.3 (0.2)	2.28 (0.19)
Hemoglobin (g/dL)	11.3 (1.5)	11.1 (1.6)	11.2 (1.4)
Bicarbonate (mmol/L)	23.2 (3.5)	24.1 (3.0)	24.0 (2.9)
Potassium (mmol/L)	4.81 (0.64)	4.64 (0.70)	4.61 (0.78)
Phosphate (mmol/L)	1.72 (0.49)	1.69 (0.49)	1.70 (0.49)
Epo (units per week)	8535	8048	8373
Antihypertensives (N per day)	1.49	1.15	1.02
Phosphate binders (N per day)	3.17	3.07	3.24