SHORT DAILY HEMODIALYSIS: INCIDENT PATIENTS HAVE BETTER CLINICAL OUTCOMES THAN THOSE CONVERTED FROM CONVENTIONAL REGIMEN

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INTRODUCTION AND AIMS

Most of the studies published on *daily hemodialysis* compare patients prior to and after the conversion from conventional thrice-weekly (CHD) to short daily (5-7 times a week) hemodialysis (SDHD).

We report data on clinical outcomes from *incident short daily hemodialysis patients* (iSDHD) compared to *patients converted from CHD to SDHD* (cSDHD) in a single dialysis center.

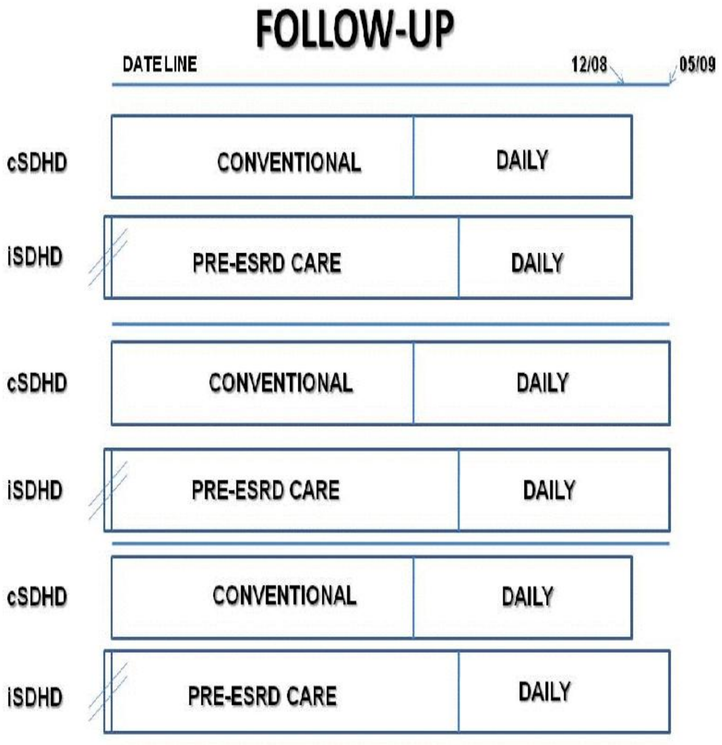
METHODS

Sixty-three consecutive unselected patients: 42 males, 21 females, mean age 57.4±19.0 (9-95) yrs, were stratified in two groups by their origins before admitting into a short daily hemodialysis schedule: 29 patients were started on daily hemodialysis first time ESRD treatment and 34 patients were converted from the conventional regimen.

With a mean time of 37.5±22.2 (3-103) months on CHD before conversion, the cSDHD group was subsequently followed for 26.5±11.6 (6-46) months and the iSDHD group was followed for a mean time of 19.3±8.5 (6-38) months (*Fig. 1*), both in an *exclusive short daily in-center hemodialysis program* (1.5-2.5h - 6 times a week, 300 ml/min blood flow, 700 ml/min dialysate flow, single-use low flux dialyzer - Polyflux Gambro).

Cross-sectional analysis was done from the most recent data.

FOLLOW-UP



RESULTS

(*Nonsignificant Differences*)

	cSDHD	iSDHD
• Age *(years)*	57.3±15.1	58.6±22.5
• Renal Transplantation *(n)*	3/34	3/29
• Diabetes *(n)*	11/34	10/29
• Hypertension *(%)*	20	21
• URR	0.49±0.05	0.51±0.07
• Hemoglobin *(g/dl)*	12.1±1.6	12.6±1.6
• ESA Requirements (UI/week)	7600±7277	6077±4749
• Serum Albumin *(g/dl)*	4.1±0.4	4.2±0.3
• Calcium *(mg/dl)*	8.8±0.9	9.1±1.0
• Phosphate *(mg/dl)*	5.9±1.3	5.3±1.7

RESULTS

(*Significant Differences*)

	cSDHD	iSDHD
• Male/Female (%)	82/18	52/48 *
• AVF (%)	81	48 *
• PTH (pg/ml)	485±366	283±202 *
• B2-Microglobulina (mg/l)	29.9±9.1	17.5±7.8 *
• CRP (mg/dl)	1.1±0.9	0.8±0.7 *
• Employment Rate (%)	43	67 *
• Mortality Rate (n)	7/33	1/29 *

* *p<0.05*

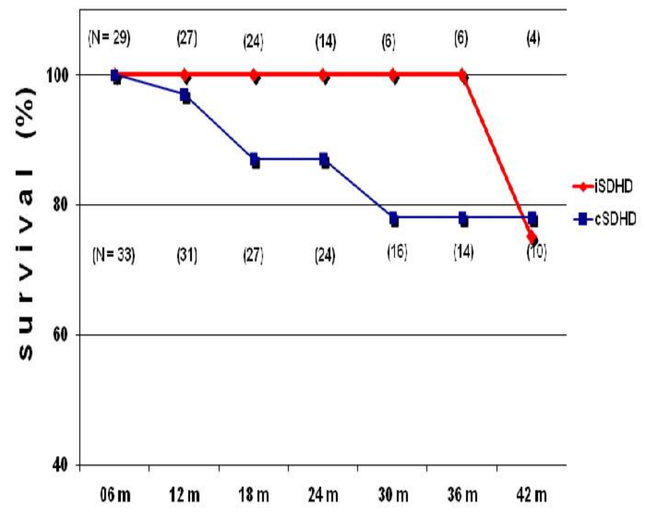
Age and Causes of Death

Converted *Incident*

Patients	Age
AFS (sudden death at home)	80
EBO (MI at Unit)	71
HMC (sepsis)	73
JGG (sudden death - MI)	64
OLG (heart valve surgery))	66
FANO (stroke)	80
RSB (pacreatitits)	82
MD (lung cancer)	74

cSDHD average age at death = 73.71+6,61 yrs

SDHD - Actuarial Survival Curves



CONCLUSIONS

Short daily hemodialysis has been associated with biological, clinical and psychosocial improvements of ESRD patients converted from the conventional regimen.

However, our data show that some burden of the previous conventional treatment still remains, since *incident new-onset SDHD patients do better, despite the comparable profile of daily dialysis treatment currently delivered.*

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