KSN 2018
Seoul, Korea · May 17 - 20

Abstract Type : Poster
Presentation No. : PDL 059

The Long Inter-Dialytic Interval and Day-of-Week Mortality in a National Hemodialysis Cohort

Amy You[1], Kamyar Kalantar-Zadeh[1], Yoshitsugu Obi[1], Carola Kleine[1], Soojeong Choi[1], Inkyong Hur[1], Csaba Kovesdy[2], Elani Streja[1], **Connie Rhee[1]**
[1]Department of Internal Medicine/Nephrology, University of California Irvine, United States
[2]Department of Internal Medicine/Nephrology, University of Tennessee Health Science Center, United States

Objectives: Maintenance hemodialysis (HD) is typically prescribed as thrice-weekly treatments with two 1-day and one 2-day intervening intervals between sessions. Growing evidence shows that mortality risk peaks the day after the long (2-day) interdialytic interval. It remains unclear if this heightened mortality risk is due to excess accumulation of uremic toxins/solutes and fluid vs. large fluxes associated with HD removal at the end of the interval.

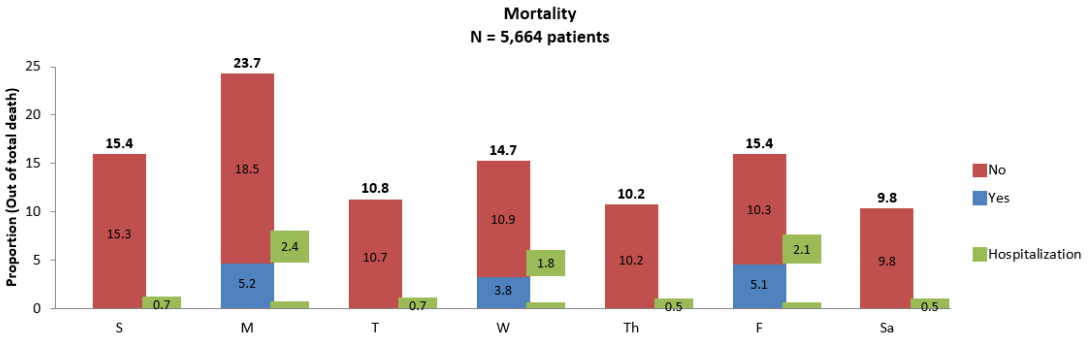
Methods: We identified 105,120 patients receiving HD from a large national dialysis organization over 2007-11 who were on a stable thrice-weekly HD schedule at least one week prior to death or censoring. We compared all-cause mortality by day-of-week among patients receiving HD on a Monday-Wednesday-Friday (MWF) vs. Tuesday-Thursday-Saturday (TTS) schedule. Among death events occurring on scheduled HD days, we examined whether patients underwent outpatient HD treatment that day (to determine whether the last outpatient treatment prior to death occurred before or at the end of the long interval), and if death events were coincident with a hospitalization (during which inpatient HD could have been administered).

Results: There were 61,152 patients on a stable MWF schedule and 43,968 patients on a stable TTS schedule. Among MWF and TTS groups, the highest proportion of deaths were observed the day after the 2-day interval. Among patients who died the day after the long interval, most did not undergo outpatient HD treatment on the day of death, of whom a small proportion had a coincident hospitalization. In analyses stratified by residual kidney function, we similarly observed that a higher proportion of deaths was observed the day after the long interval; however, these patterns were slightly attenuated in those with substantial residual kidney function (urine urea clearance [KRU] ≥3ml/min).

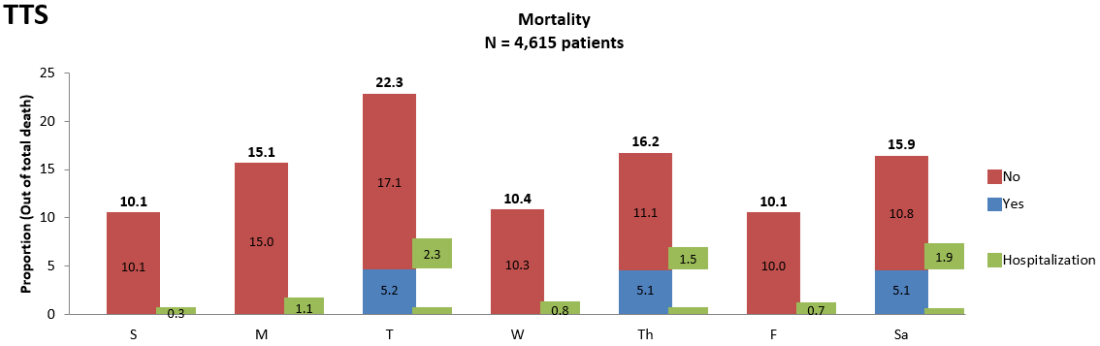
Conclusions: The greatest proportion of deaths occurred after the long interdialytic interval, largely in the absence of a coincident outpatient HD treatment or hospitalization.

Day-of-Week Mortality Among Hemodialysis Patients

MWF



TTS



Day-of-Week Mortality Stratified by Residual Kidney Function (KRU)

MWF **TTS**