

URGENT-START PERITONEAL DIALYSIS VERSUS OTHER MODALITIES OF DIALYSIS: LONG-TERM OUTCOMES

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Several reports have validated the short-term feasibility of urgent-start peritoneal dialysis (USPD), a modality whereby unplanned ESRD patients are started on peritoneal dialysis (PD) utilizing low-volume, recumbent PD soon after PD catheter placement. While results in short-term studies demonstrate similar outcomes for USPD to other modalities of dialysis, longer-term studies are lacking.

This is a single-center prospective cohort study comparing hospitalizations, infections, and technique survival in 161 incident ESRD patients [20 planned HD, 17 planned PD, 78 urgent-start HD with central venous catheter (ICHHD-CVC), 46 USPD] admitted to our dialysis unit between March 15, 2010 and March 15, 2013. We performed an intention-to-treat analysis. The mean duration of followup was 810 ± 390 days.

As compared to the USPD group, the ICHHD-CVC group had a 43% higher adjusted rate of hospitalizations (IRR 1.43; 95% CI 1.105 – 1.849; $p=0.0045$) and 4.3 fold higher adjusted rate of catheter-related bacteremia (IRR 4.32; CI 1.48 – 12.62; $p=0.0074$). As compared to the USPD group, the planned PD group had a similar rate of peritonitis (IRR 1.98; 95% CI 0.71 – 5.56; $p=0.19$), exit-site infections (IRR 0.87; CI 0.24 – 3.15; $p=0.83$), and hospitalizations (IRR 1.057; CI 0.67 – 1.66; $p=0.81$). Technique survival was similar between the different groups at 6 months, 1 year and 2 years respectively (USPD $98\% \pm 15$, 95 ± 23 , 78 ± 42 ; ICHHD-CVC 90 ± 31 , 86 ± 35 , 76 ± 43 ; planned PD 100 ± 0 , 100 ± 0 , 91 ± 30 ; planned HD 95 ± 22 , 95 ± 23 , 93 ± 44).

In this intention-to-treat analysis we have demonstrated that USPD, as part of a structured program, provides superior hospitalization and infectious outcomes as compared to urgent ICHHD-CVC population for up to two years after dialysis initiation. Furthermore, when compared to planned dialysis modalities (HD and PD), USPD has similar infectious, hospitalization and technique survival outcomes. These findings suggest USPD should be the preferred modality offered to appropriate PD candidates who present unplanned requiring urgent dialysis.