



Dialysis Modality Option: A Process to Audit and Improve

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Dear Editor,

The process of dialysis modality selection by patients is subject to multiple conditional variables, both patient and system related. A shared decision-making process is advocated to culminate in an informed consent.^{1,2} However, quality assessment on this option process, looking forward to mapping barriers and improve the trajectory of patients, is still lacking in most nephrology departments.³

Therefore, we sought to evaluate the circuit of dialysis modality selection and transition to dialysis in a cohort of consecutive patients (n=99) who built dialysis access in our Hospital Center in the year 2020. This population was 63.3 ± 17 years old (57% >65), with 15% diabetic nephropathy and scored 5.3 ± 2.4 age adjusted -Charlson Comorbidity Index.

Evidence of formal consultation to support the Dialysis option was documented in 90% of patients; 10% placed central venous catheter (CVC) in urgent context. The distribution of renal replacement therapy option after educational appointment and final allocation is evidenced in Fig. 1. Notably 34% of patients reported to be undecided about dialysis modality but 100% of these patients ended up building vascular access for HD, although, in most patients there are no documented reasons for ineligibility for peritoneal dialysis. Unfortunately, the process was not controlled so it was not possible to document medical registries the barriers to home dialysis in such patients.

Contraindications to PD were rare: two patients were not admitted due to history of major abdominal surgery but 2 other were allocated to HD due to inability to perform technique, in the absence of assisted dialysis offer. One patient who opted for PD induced urgent HD via CVC during hospital admission. In the HD option subgroup only one patient was allocated to PD due to vascular access thrombosis.

Searching for eligibility and barriers to home dialysis will mapped the process further. In 55% of the sample, no cause for non-eligibility for peritoneal dialysis was identified; in the group with registered criteria, inability to perform self-dialysis without the possibility of assisted dialysis was the reason to exclude PD in 43% of the patients.

This audit study allowed us to sum up key points to improve our services: reinforce patient education; apply checklist in the evaluation of patient eligibility for home dialysis and include patient reported outcome measures in the processes of option, dialysis access and induction. In present literature, the proportion of contraindications for PD range between 17% to 28%.^{4,5} These limitations can be explained by structural and resource variables but clinicians approach matters and the lack of assisted PD offer also contributes to lower PD exposition.⁵

However, 23% of patients ended up on PD, a percentage that is twice as high as the national average for PD induction. One patient who opted for PD, required urgent hospital CVC induction, although urgent-start PD is a safe practice for unplanned dialysis start. At the end of the process 19% of the patients induced in HD started with CVC and needed hospital admission, a circuit that calls for preventive measures such as a structured Advanced Chronic Kidney Disease Unit focused on improving transitions and mitigating unplanned dialysis induction. Assisted peritoneal dialysis remains an unmet need.⁴

References

1. Zee J, Zhao J, Subramanian L, Perry E, Bryant N, McCall M, et al. Perceptions about the dialysis modality decision process among peritoneal dialysis and in-center hemodialysis patients. *BMC Nephrol.* 2018;191:298. doi: 10.1186/s12882-018-1096-x.
2. Winterbottom A, Bekker H, Mooney A. Dialysis modality selection: physician guided or patient led? *Clin Kidney J.* 2016;9:823-5. doi: 10.1093/ckj/sfw109.
3. Salas-Gama K, Díaz-Gómez JM, Bolibar Ribas I. Appropriateness of the dialysis modality selection process: A cross-sectional study. *Medicine.* 2022;101:e31041. doi: 10.1097/MD.00000000000031041.
4. Hingwala J, Diamond J, Tangri N, Bueti J, Rigatto C, Sood MM, et al. Underutilization of peritoneal dialysis: the role of the nephrologist's referral pattern. *Nephrol Dial Transplant.* 2013;28:732-40. doi: 10.1093/ndt/gfs323.
5. Tavares J, Silva F, Lima A, Carvalho MJ, Cabrita A, Rodrigues A. Urgent-Start Peritoneal Dialysis – a viable option? A case report and literature review. *Port J Nephrol Hypert* 2020; 34: 110-5.

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