Abstract:

Introduction: The implantation of acute or chronic vascular accesses for hemodialysis (HD) in end-stage kidney disease patients is a critical skill procedure for nephrologists, with an impact on short- and long-term outcomes of the modality and patient survival. Placement circumstances, however, may depend on the availability of technological support and will likely vary across the world.

Materials and methods: We retrospectively reviewed our local experience with ultrasound-guided tunneled dialysis catheter (TDC) insertions but without access to fluoroscopic guidance. Data were available for 63 patients with TDCs placed by faculty nephrologists at the dialysis unit procedure rooms between March 2015 and February 2018. We reviewed circumstances of TDC placement, patient characteristics, and procedural outcomes.

Results: The mean age was 62 (± 41) years, and 46% of the patients were male. All TDC placements were technically successful and no major complications occurred. Most TDCs (52.8%) were a de novo placement. In the de novo patient group, there were 27 right-sided internal jugular vein (IJV) and 6 left-sided IJV cannulations. Blood pump flow was 284.6 (± 58) mL/min via the temporary catheter 1 month before and 316.7 (± 46) mL/min 1 month after TDC placement (p < 0.0001). The majority of catheter tips (63%) reached the right atrial placement position successfully.

Discussion: Technologically successful TDC placement can be performed without fluoroscopic tip guidance and result in improved access flows and dialysis efficacy when compared to temporary hemodialysis catheters.

Reference: