

fistula post Aorto-bi-femoral graft presented with life threatening bleeding managed by endovascular stenting by covered stent.

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HERO® Graft Placement: Getting Rid of the Catheter in Patients with Central Stenosis

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Background: Central venous stenosis and occlusion are a major cause of vascular access dysfunction and failure. The HeRO® Graft provides access for patients with central venous occlusion who are catheter-dependent or have failing fistulae or grafts by providing reliable venous outflow directly into the right atrium [Figure 1c and d]. Moreover, when combined with the use of early cannulation grafts it has the advantage of immediate access directly after the procedure. We reviewed our experience using the strategy of combining the use of HeRO graft with early cannulation graft. **Method(s):** Patients with suspected central venous occlusion or stenosis who are catheter-dependent or have failing fistulae or grafts were discussed in multi-disciplinary meetings. Only patients with central venous stenosis or occlusion confirmed by CT or conventional venogram were included [Figure 1a and b]. Patients with active infection, brachial artery diameter less than 3 mm, hypercoagulable state and ejection fraction less than 20 were excluded. **Result(s):** Five hemodialysis patients with history of multiple failed arteriovenous access and confirmed central venous occlusion were recruited. All patients underwent successful placement of HeRO graft in combination with early cannulation graft [Figure 1c and d]. All grafts were accessed within 48 hours. Median follow up was 219 days (range 32 -240 days). No adverse events were noted during the follow up period. HeRO graft thrombosis occurred in three patients, requiring re-intervention using percutaneous thrombectomy, primary patency 40%. All five grafts remain patent and functional, secondary patency 100%. **Conclusion(s):** HeRO® graft placement can provide vascular access in hemodialysis patients with central venous occlusion who would otherwise remain catheter dependent. Combining the use of early cannulation graft with HeRO graft placement can further reduce catheter dependence and does not appear to impact HeRO graft secondary patency.

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Drug-Coated Balloon use in Dysfunctional Arterio-Venous Access Treatment the Effect of Consecutive Treatments in Target Lesion Primary Patency

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Background: This was a retrospective longitudinal analysis investigating the safety and effectiveness of consecutive treatments with the Lutonix Drug-Coated Balloons (DCB) in dysfunctional arteriovenous access; both fistulae (AVF) and grafts (AVG). **Method(s):** From January 2015 to December 2017 (3 years), 339 Lutonix DCB were used in 257 procedures of 165 patients with a dysfunctional AVF or AVG. Of these patients, 33 had ≥ 2 procedures, adequate data and were included in the analysis. In these patients, 112 procedures were performed (22 treated twice, 4 patients 3 times, 7 patients 4 times, 2 patients 5 times and 3 patients 6 times) using 133 devices. Mean lesion follow-up was 247 days (min. 20 days – max. 908 days). Mean balloon diameter was 8.13 mm (3-12 mm) and length 63.16 mm (40-150 mm). Primary outcome measure safety, defined as freedom from any serious adverse event(s) involving the AV access circuit through 30 days for all procedures and target lesion primary patency (TLPP). Secondary outcome measures included investigation of independent factors that may influence outcomes. **Result(s):** Safety was reached in all cases (112/112 procedures, 100%). Median TLPP was 227 days for the first intervention and 280 days for the second consecutive intervention [$p=0.37$; Hazard ratio: 1.271 (CI: 0.75-2.16)]. **Conclusion(s):** Consecutive use of the Lutonix DCB for the treatment of dysfunctional dialysis access was safe. There was no significant difference in TLPP between the 1st and 2nd procedure, although a numerical improvement was observed. Results suggest consistency in TLPP regardless of the aging arterio-venous access.

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The Use of Supera Stents in Maintaining Dysfunctional Dialysis Arterioveonus Fistulas: A Single Center Experience

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Background: Dialysis access failure is a major cause of mortality and morbidity among dialysis patients. Preservation of access is critical to maintaining hemodialysis, avoiding uremia, and managing the complications of kidney failure. The usual IR approach to thrombosed or stenosed arteriovenous fistula (AVF) is a combination of thrombectomy and balloon angioplasty of the underlying lesion. Stents and stent grafts appear to be an ideal method to treat thrombosis or neointimal hyperplastic stenosis. These safe endovascular device stents improving blood flow through the fistula or graft as they oppose elastic recoil and subsequent thrombosis. Stent placement is minimally invasive procedure, performed by IR doctors utilizing ultrasound and fluoroscopic guidance with rare complication and less stay in the hospital. The main indications of these procedure are early recurrent thrombosis, recoil stenosis and pseudoaneurysm of AVF. **Method(s):** This is a retrospective study of 11 consecutive patients (6 females) with mean age of 56 years, who underwent