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AV access

A case review from the

Ross Pilot Study

Pilot study* of IVUS imaging during endovascular interventions of failing hemodialysis access grafts

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Study design:

Prospective, randomized, unblinded, single-center study comparing intravascular ultrasound (IVUS) to traditional digital subtraction angiography (DSA) in patients with failing hemodialysis access grafts. 100 patients were enrolled.

Patient history:

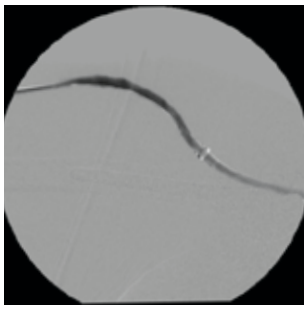
The patient is a 35 year-old African American woman with a history of hypertension and congestive heart failure who was hemodialysis dependent for approximately 2.4 years.

She was referred for evaluation of slow flow and prolonged cannulation site bleeding of a right upper extremity HeRO graft during hemodialysis 2 days prior to the index procedure.

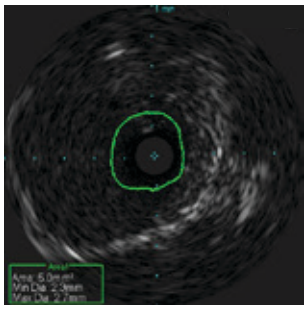
ClinicalTrials.gov: NCT01929369

Pre-treatment:

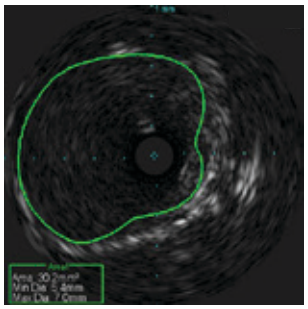
Tightest Stenosis by IVUS = 5.0 mm^2
Reference Area by IVUS = 30.2 mm^2



DSA was unremarkable



IVUS: intra-graft lesion (pre-PTA)

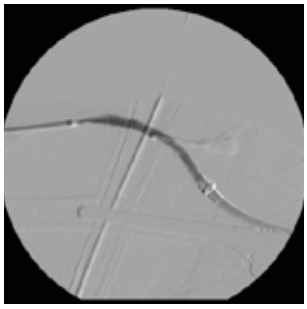


IVUS: intra-graft reference (pre-PTA)

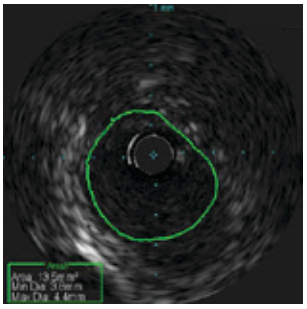
Intervention: 7 X 80 mm (sized per IVUS)

Post-treatment:

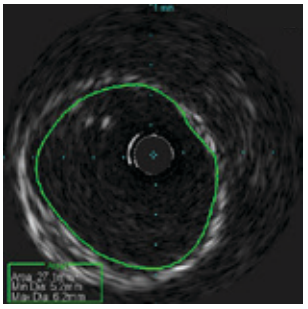
Tightest Stenosis by IVUS = 13.5 mm^2
Reference Area by IVUS = 27.1 mm^2
Luminal Gain by IVUS = 8.5 mm^2 or 70%



DSA was unremarkable



IVUS: intra-graft lesion (post-PTA)



IVUS: intra-graft reference (post-PTA)

Clinical findings:

Stenosis without evidence of thrombosis. IVUS modified treatment because the target lesion was not seen angiographically. Lesion detection and size measurements led to intra-graft balloon angioplasty.

For more information, please visit the Venous Educational Resources page at www.philips.com/PVDresources.

The opinions and clinical experiences presented herein are for informational purposes only. The results from this case study may not be predictive for all patients. Individual results may vary depending on a variety of patient-specific attributes and related factors.

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