Assisted Tibial Artery Re-entry During SAFARI Revascularization

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Disclosure

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I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
WHAT WAS THE Original TREATMENT FOR CLI??
EndoVascular Interventions have had incredible growth....
Infra-Genicular Revascularizations

- Critical Limb Ischemia (CLI) treatment now requires unobstructed **Wound Directed Revascularization**
- We can now recanalize through the pedal loop and tarsal arteries when needed
- The more we treat, the more calcified, difficult complete tibial occlusions we find
What should we expect today in limb preservation?
Directed Revascularization is Vital, especially if we can limit amputations to a TMA...
InfraGenicular Revascularizations

Many times, with added retrograde approaches when needed, we can revascularize the toughest of lesions even if subintimal tracts
Approaches

• We have escalation techniques to revascularize complex tibial CTO’s
  – Antegrade subintimal
  – Retrograde luminal
  – Retrograde Subintimal- SAFARI
  – Balloon assisted subintimal approach
SAFARI

- **SUBINTIMAL ARTERIAL FLOSSING WITH ANTEGRADE-RETROGRADE INTERVENTION**
Sometimes the Retrograde approach can end up in same subintimal plane as the antegrade approach.
75 yo M, Rutherford 5 ischemic heel wound who transferred care to us. At St. Elsewhere, was only offered BKA as he had was told No Options after attempted angios
Inability to stay intraluminal
After Flossing Access gained, unable to pass a 0.014in support catheter across occlusion to switch to a stiffer support wire.
Early "Jenali" lesion
When the same plane is not achieved, you can use a small balloon in the subintimal tract to disrupt it, and potentially regain luminal access.
68 yo F with severe LLE rest pain
Prior Popliteal Stenting at OSH
2 years ago
Antegrade 0.014in Support catheter and wire in ATA.
Unable to connect the two Antegrade 0.014 barebacked support catheter & wire.

Retrograde 0.014 barebacked support catheter & wire.

Antegrade 2mm balloon to disrupt subintimal plane.
Retrograde wire now passing into disrupted vessel lumen next to deflated balloon.

Snared retrograde wire brought out through groin access.
Recalcitrant stenosis

1.25 crown orbital atherectomy

Post atherectomy angiography
However, sometimes there is inability to be in the same plane despite advanced techniques.

And I chose to not continue the subintimal tract more cranial than the region of tibial occlusion.
70 yo M Retired Physician
PMHx of CAD, STEMI s/p CABG
ESRD, On HD via AVF
DM on Insulin
Has a 2.0cm heel wound that has been managed by Podiatry with poor healing
Chronic Popliteal Artery occl

Calcified occluded PTA

Reconstituted distal PTA

Microcurrence & Nitrex Wire
After escalation of techniques including balloon expansion, could not regain intraluminal flossing.
Bareback pedal balloon as target

Re-Entry Device from above

4mm snare from pedal access

Re-entry wire passed through snare

Re-Entry wire brought out through Pedal access.
Antegrade wire now passed by pedal access site.
Summary

- We are now more aggressive than ever with wound directed revascularization.
- Many advanced techniques are needed to successfully cross complex calcified CTO’s.
- Operators need an escalation of techniques in mind to ultimately succeed.
- Using re-entry device assisted tibial revascularization can be done safely and efficiently.
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