RECCROSS

Revascularization by Crushing Chronically Occluded Stents

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Conflict of Interest

I do not have any potential conflict of interest
Defining the problem

• Chronically occluded SFA/Popliteal stents present a clinical challenge for endovascular therapy
• Often bypass is the best option, particularly for CLTI
Defining the problem

- Many techniques have been developed to overcome clinical challenges in EVT
  - Subintimal recanalization (Bolia 1989)
  - SAFARI (Sabri/Hendricks 2006)
  - Subintimal re-stenting of occluded SFA stent (Duterloo 2007)
  - Direct stent puncture (Manzi 2011)
Defining the problem

- Recently developed woven nitinol stent design has allowed new innovations in challenging clinical cases
  - 5x radial force of steel-cut nitinol stents
  - Improved patency and luminal gain in calcium
  - Improved patency in high flex regions (CFA, POP)
  - Ability to crush occluded stents
Patient 1: LK

- 71yo man, Prior failed SFA intervention
- Limb salvage Fem-BK pop bypass with cryo vein, Failed < 3 months
- Presents to me with no options?
• Pre-op ABI 0.38/0.00

• AT velocities 18-24m/s

• 1st digit pressure unable to obtain.
Proximal SFA occluded BMS
Patient 1: LK
Above knee popliteal Pre-Intervention
Single-Vessel AT reconstitution
Retrograde AT access
Wire Snared in the distal SFA
AT angioplasty 3mm
BK pop/SFA angioplasty 6mm
Proximal angioplasty 6mm
Proximal angioplasty 6mm
Post-balloon
5.5mm Supera deployment

Undersize by 0.5-1mm from balloon size
Supera deployment
Post dilate with 5.5mm balloon
Treat remainder of SFA/POP
SFA/POP Supera stent
TPT recanalization
- Pre-op ABI 0.38/0.00
- AT velocities 18-24m/s
- 1st digit pressure unable to obtain.
- Post-op ABI 0.80/0.87
- AT velocities 60-80m/s
- 1st digit pressure 70.
Patient 2: MP

- 79 yo female, Prior failed popliteal stent
- Recent MI, CKD III, Osteo on MRI
- Ischemic rest pain.
• Pre-op ABI 0.37

• AT velocities 30’s

• 1\textsuperscript{st} digit pressure 54, DBI 0.33
Above knee pre-intervention
Below knee pre-intervention

AT Target
Retrograde wire access

- Micropuncture dilator
- 0.018 Command ST wire
- 0.018 CXI crossing catheter
Retrograde wire access
Retrograde wire access

Hydrophilic tip, stiff body wire followed by 0.018 CXI crossing catheter
Retrograde Crossing Occluded stent
Wire Externalized into 0.035 Catheter
Supera deployment
Nominal deployment
• Post-op ABI 0.96

• AT velocities 100-137

• 1st digit pressure 86. DBI 0.57
Conclusions

- Recanalization of chronically occluded stents can be achieved with endovascular techniques
- Retrograde pedal access is often required
- Limb salvage requires aggressive and thorough interventions to treat inflow, outflow and conduit.
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