Transcollateral Approach in CLI

“Can’t See the Forest for the Trees”

George L. Adams, MD, MHS, FACC, FSCAI

Clinical Associate Professor of Medicine
University of North Carolina Health System
Director of Cardiovascular and Peripheral Vascular Research, Rex Healthcare
Raleigh, North Carolina
Disclosures

• **Consultant**
  - Cook Medical
  - Daiichi Sankyo
  - Lake Region Medical
  - Volcano
  - Asahi
  - Abbott Vascular
  - CSI
  - Medtronic
  - Terumo

• **Research**
  - Boston Scientific
  - CloSys
  - Daiichi Sankyo
  - Flexible Stenting Solutions
  - Medtronic
  - Volcano
  - Mercator

• **Speaker**
  - Abbott Vascular
  - CSI
  - Cook Medical
  - Spectranetics
  - Medtronic
Background

• Approximately **8 million Americans** over the age of 40 have PAD.

• Three Growing Epidemics:
  – **Age**: 40.3 million Americans > 65
  – **DM**: 10.9 million Americans > 65
  – **Kidney Disease**: 26 million Americans

• These 3 epidemics result in:
  – Multilevel disease
  – Chronic total occlusions

• At its worst, PAD results in failing to heal wounds, amputation and a high likelihood of death

1. U.S. Census Bureau, 2010
Claudication

Contralateral

Antegrade

Retrograde

Transcollateral

CLI
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Deep Femoral (Profunda) – SFA

Geniculate branches from Popliteal – Tibials

Tibial – Tibial
- Peroneal Anterior Comm Branch – ATA
- Peroneal Posterior Comm Branch – PTA
- Plantar Arch Collateral – ATA to PTA
Transcollateral Tools & Techniques

- **General**
  - Long
  - Low Profile
  - Flexible

- **Wires (Collateral)**
  - Floppy Tip
  - Hydrophilic Polymer Coated
  - Strong Body
  - 0.014
  - Recs: Runthrough, Prowater, Sion, Sion blue, Whisper

- **Wires (CTO)**
  - Stiff Tip
  - Hydrophilic Polymer Coated
  - Strong Body
  - 0.014
  - Recs: 18 & 25g Approach, 18g Victory, 30g Astado Control

- **Support Catheter**
  - Flexible
  - Low Profile
  - Hydrophilic
  - Recs: Corsair

- **Techniques**
  - Wrapping Wire
  - Double Balloon

- **PTA**
  - Long Shaft
  - Low Profile
  - Rapid Exchange
  - Recs: Cook 0.014LP, Coronary
Patient History

• 77 y/o female
• IDDM, HTN, Hyperlipid, ESRD (Dialysis)
• Non-healing ulcer on Left BKA stump
Selective Angiography of the Left Lower Extremity
Selective Angiography of the Left Lower Extremity

Flush Occlusion of the SFA
Profunda Collateral Access
PTA SFA followed by Wrapping the Wire
PTA SFA Resulting in Dissection

PTA f/antegrade

Prox SFA Dissection

S/P Stenting
Popliteal Stenosis

Popliteal stenosis  
Post Pop Stent
Patient History

- 65 y/o male
- IDDM, HTN, and Hyperlipid
- Non-healing ulcer on the bottom of the foot (PT distribution)
Posterior Tibial Occlusion
Crossing and Treatment

Transcollateral PTA

Recanalization of PT
Ulcer on the Medial Aspect of the Left Ankle

Which Artery is Affected?

Adams, GL
Ulcer on the Medial Aspect of the Left Ankle

Angiogram

Endovascular Intervention
Ulcer on the Medial Aspect of the Left Ankle – Post Intervention
Limitations

- Current devices are not long enough
- Current devices are not low profile
  - Specialized Balloons
  - Atherectomy Devices
  - Stents
Thank You!
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