BASIC TECHNIQUES IN PERIPHERAL INTERVENTIONS

Step by Step: How I treat SFA lesions

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Access to the lesion

- Common femoral art.
- Superficial femoral art.
- Deep femoral art.
- Brachial (radial) art.
- Popliteal art.
- Tibial vessels
  - ATA/PTA/PA
  - A. dorsalis pedis/MT art.
Access to the lesion

- **Common femoral artery**
  - Antegrade puncture, antegrade recanalization
  - Retrograde puncture, cross-over, antegrade recanalization
Access to the lesion

- **Common femoral artery**
  - Retrograde puncture, cross-over, antegrade recanalization
Access to the lesion

- Superficial femoral artery
Access to the lesion

- Superficial femoral artery
Access to the lesion

• Brachial/(radial) artery
Access to the lesion

- **Popliteal artery**
  - Supine posterior position
  - Anterior position trans osseous membrane
Access to the lesion

• Tibial vessels

• IMAGING before selection!!!
  **Parallax technique**

• Micropedal puncture set 3F (Cook°), Sheatless if possible

• Local anesthesia + @ spasm medication (Nitroglycerin, Ca-antagonists,...)

• DUS, calcium-, contrast guided

• No definitive treatment
Access to the lesion

- **Tibial vessels**
  - Not always need for puncture
  - Use collaterals
  - Use footarch, if healthy!!
  - LP GW’s!!!
Passing the lesion

Subintimal = eccentric treatment

Intraluminal = circumferential treatment
Passing the lesion

• Long sheaths, positioned@proximal to the lesion
  ✓ Contrast limitation
  ✓ Support
  ✓ Protected advancement devices

• Dedicated support(balloon)catheters
  ✓ Low profile
  ✓ Well tapered
  ✓ Supporting
Antegrade intraluminal approach

- Modern generation (3rd) durable, steerable GW 0.035 – 0.018”
- Modern CTO GW 0.018-0.014” platform
- LP support (balloon) catheters
- Correct technique: tactile feedback, FAST SPINNING technique
Antegrade intraluminal approach

Antegrade subintimal approach

MISSION ACCOMPLISHED

FAILURE

- durable, steerable GW 0,035 – 0,018”, initially straight, afterwards curved
- LP support catheters
- Correct technique: BOLIA technique
Antegrade intraluminal approach

Antegrade subintimal approach

Retrograde intraluminal approach

MISSION ACCOMPLISHED

MISSION ACCOMPLISHED

FAILURE

FAILURE
Antegrade intraluminal approach

Antegrade subintimal approach

Retrograde intraluminal approach

Retrograde subintimal approach

• Sheetless by preference
• Durable, steerable GW 0.035 – 0.018”, initially straight, afterwards curved
• LP support catheters
• Correct technique: BOLIA technique
Antegrade intraluminal approach

Antegrade subintimal approach

Retrograde intraluminal approach

Retrograde subintimal approach

Bidirectional approach
Bidirectional approach

Rendez-vous/double balloon technique
Bidirectional approach

**Standard CART technique**

- Bidirectional access
- Inflation retrograde balloon
- Advancing anterograde wire beside inflated retrograde balloon
- By deflating retrograde balloon, entering from antegrad the real distal lumen
Bidirectional approach

Reverse CART technique

- Bidirectional access
- Inflation antegrade balloon
- Advancing retrograde wire beside inflating antegrade balloon
- By deflating antegrade balloon, entering from retrograde the real proximal lumen
Treating the lesion

**pre-dilatation POBA**

DCB - 3’

FLD/RS>30%?

NO

BMS
modern generation
Low thin strut profile
Vascular mimetic implants

mission accomplished

DES

FLD/RS>30%?

NO

YES

YES

ADVANCED TECHNOLOGIES IN PERIPHERAL INTERVENTIONS
ADVANCED TECHNOLOGIES IN PERIPHERAL INTERVENTIONS

DCB - 3'

mission accomplished

low thin strut profile
Vascular mimetic implants

Treating the lesion
Conclusion

• Successful treatment of the SFA means: right access, right passing, right treatment.
• My preferred access for the SFA is anterograde, direct ipsilateral or via cross-over procedure.
• Plan B is a retrograde access in mid/distal SFA, popliteal or tibial vessels.
• My preferred way of passing is the intraluminal approach, using newer generation of devices and techniques (fast spinning).
• Plan B is subintimal using the BOLIA technique.
• Plan C is definitely bidirectional approach: rendez-vous with double balloon technique or CART/reversed CART are valuable alternatives for initial failures.
• I follow a strict algorithm for treatment of SFA disease, based on scientific and health-economical guidelines.
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