[My] experience in Austria

Marianne Brodmann, MD
Angiology, Medical University Graz, Austria
Disclosure

Speaker name:
Marianne Brodmann

I have the following potential conflicts of interest to report:

- Consulting, Speaking honoraria

  BARD, Medtronic, Spectranetics, Biotronik, Bayer Healthcare, Daiichi Sankyo, Intact Vascular, Profusa, Rexgenero,
Guide wire selection for POP-BTK Treatment

Why do we have to discuss that?

- We face different disease (CLI instead of IC), therefore we have to be more aggressive to reopen as many vessels as possible with every effort.
- We face a different main risk factor in BTK disease: DIABETES, therefore lesions are different [more calcium, vessel spasm esp in younger diabetics without calcified vessels......]
- We face different anatomical nature than Iliac and SFA [tortuous vessels, small diameters (1-4m), curves to be overcome....]
- We face the fact the place where we are acting is far away
Guide wire selection for POP-BTK Treatment

What we always have to have in mind!

- The guidewire (GW) is probably the most important tool for the endovascular treatment of arterial obstructions.
- In fact, the treatment of a lesion is only possible when the GW is passed beyond the target lesion.
Guide wire selection for POP-BTK Treatment

Why do we have to discuss that?
Guide wire selection for POP-BTK Treatment

Why do we have to discuss that?
Guide wire selection for POP-BTK Treatment

Because that´s what we want to do more often!

Baseline

Either that way

Or that way

Using the old tools will not be successful!
Guide wire selection for POP-BTK Treatment

How to choose the right guidewire?

The choice of GW for BTK angioplasty mainly depends upon the characteristics of the lesion and the strategy the operator decides to pursue.

**Antegrade 1st**
An intraluminal GW advancement should be pursued as much as possible.

Hydrophilic GW 1st choice [strategy with delicate rotations and pushing, may succeed in finding a “soft inner pathway within the occluded arterial lumen, surrounded by stiffer walls”]

2nd choice: a stiffer, non-hydrophilic, tapered GW [pursue a “perforating” approach]

**Subintimal** if intraluminal approach fails

Hydrophilic GWs with a hydrophilic tip coating and a stiff body

Keep the loop as short as possible

**Retrograde 2nd**

all techniques mean navigating within thin and tortuous vessels, and because damaging the distal circulation can be limb-threatening, the GWs to be used in this technique should have good torque control and a hydrophilic but soft tip.
Guide wire selection for POP-BTK Treatment

The Three Most Important Design Features that Impact Performance

**Distal Tip**
- Tip Load
- Spring Coil
- Taper
- Coating

**Core**
- Thickness
- Material
- Smooth or Abrupt Taper

**Coating**
- Hydrophilic + Polymer
- Hydrophilic on Spring Coil
- Hydrophobic
- Uncoated Distal Tip
Guide wire selection for POP-BTK Treatment

**Distal Tip**

- Tip Load
- Spring Coil
- Taper
- Coating

**Core**

- Thickness
- Material: Nitinol
- Thin core
- Stainless steel
- Smooth vs. Abrupt taper

**Coating**

- Hydrophilic
- Polymer Sleeve
- Hydrophilic on Spring Coil
- Hydrophobic
- Uncoated Distal Tip

**Trade Offs**

- **Tip Load**
  - The higher the tip load, the better the penetration but the more that wire wants to go straight and will not track the vessel.

- **Core**
  - The thicker the core, the better the torque and durability but the more the wire wants to go straight.

- **Coating**
  - You sacrifice tactile feel for lubricity.
Guide wire selection for POP-BTK Treatment

What we have tested so far?

**Gladius 14/18**
with Polymer Jacket is suitable for 90% of all ATK/BTK cases
Frontline/Workhorse
High durability for multiple vessels and lesions
⇒”quickly cross even calcified lesions and fibrous occlusions”

**Halberd 14/18**
stiff tip guidewire (12g Tip load): penetration capacity
for complex lesions: improved torque response and easy navigation combined with penetration capacity
⇒”easily catches the entry point of the occlusion+ easy directional control”

**GAIA PV**
tapered stiff guidewire
⇒**Deflection and directional control** with balanced penetration force and torque response

**Astato XS 40**
CTO 40 g Tip load high penetration power
Specialty: highly calcified lesions, high penetration due to tapered tip
Guide wire selection for POP-BTK Treatment

Case # 1 Strategy

0.014” guidewire

First choice: Regalia XS 1.0
Second choice: Gladius 0.014”
Guide wire selection for POP-BTK Treatment

Case # 2 Strategy

Multiple lesions
- AT occlusion
- PT occlusion
- Calcified Popliteal disease P3 segment

0.014” guidewire

First choice: Gladius 0.014”
Second choice: Halberd 0.014”
Third choice: Astato XS 20/40
Guide wire selection for POP-BTK Treatment

Case # 3 Strategy

P2 Segment of popliteal artery occluded with Ca Collateral from proximal cap

Wire requirements:
- Soft tissue tracking
- Good support
- Excellent torque
- Reasonably high tip load
- Catches proximal cap without slipping into collateral

0.018” guidewire
First choice: Gladius 0.018”
Second choice: Halberd 0.018”
Gaia PV
Astato 30
Guide wire selection for POP-BTK Treatment

If you choose your right ingredients you will be the winner!
[My] experience in Austria

Marianne Brodmann, MD
Angiology, Medical University Graz, Austria