Utility of the orbital atherectomy system (CSI) in the treatment of no-stenting zones involving isolated lesions of the popliteal artery

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The risk of treating zones with high flexion with stents
Stent fractures and impact on the patency

- 24.5% Stent fractures
- 52% fracture rate for lesions > 16 cm
- 12-M-PPR:
  - 41.1% in patients with stent fractures
  - 84.3% without stent fractures
DCBs performs worse in lesions with chronic occlusions.

Lesions length: 251±71 mm; CTOs: 49.5%

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DCBs performs worsen in lesions with chronic occlusions and additional severe calcification

DCBs in calcified lesions

Limitations of Drug coated balloons (DCBs)

- Long CTO lesions
- Severe calcification

- Vessel preparation with Atherectomy?
Atherectomy strategies

Directional
- SilverHawk® and Turbohawk™
- Pantheris™
- Pantheris™ SV

Rotational
- JetStream™ XC and SC
- ROTABLATOR™
- Phoenix

Laser
- Turbo Elite®, Turbo Power®, Turbo Tandem®, Excimer Laser Ablation System

Orbital
- STEALTH 360® Peripheral Orbital Atherectomy System
Orbital Atherectomy System

Sleek Electric-Powered Handle
- Simple device set-up
- Optimum torque transfer to the shaft and crown
- Short overall treatment times

Saline Pump
- Mounts directly to an I.V. pole
- Bathes shaft and crown to facilitate smooth device operation

Crowns
- Micro Crown
- Classic Crown
- Solid Crown

Prime Control
- Flush saline from device

Simple Speed Settings
- Instant Response
- On/Off Switch
CSI’s Diamondback 360® Peripheral Orbital Atherectomy System, featuring OAS technology.
First experience in Europe/Germany

• OAS 2.0 available in January 2019
• First case 14.1.19

Female patient with chronic distal SFA occlusion and claudicatio intermittens

Failed conservative treatment with reduction of the pain free walking distance to 50-80m
Angiographic imaging

Successful recanalization of the occlusion and confirmation of the intraluminal position of the catheter
Use of the 2.0 mm OAS for the distal SFA

Angiographic result after use of the 2.0mm OAS
Use of 5x80mm DCB

No evidence of dissection or remarkable residual stenosis

No need for stent placement despite the heavy calcified and chronic occlusion
Use of OAS in no-stenting zones due to the limited incidence of dissections/residual stenoses post PTA

Patient with stenosis based on the last CTA 7 months ago of the A.poplitea in the II Segment

Angiography in AP Projection confirmed the CTA. However the wire has the tendency to go in the collateral
Angiography in oblique projection

Chronic calcified occlusion and not stenosis of the poplitea artery in the II Segment

Catheter and wire were in the collateral giving the impression of stenosis
Use of OAS in no-stenting zones

Successful recanalization of the occluded popliteal artery

Angiography after use of the 1.5mm OAS
Use of 5x40 DCB
Follow up

Triphasic signal in the A.pop II Segment

MRA showed persistent patency without any evidence of residual or new stenosis
Case Nr. 2
Conclusions

• Promising early experience with the use of OAS in Europe
• Safe and successful use in chronic calcified lesions especially involving no-stenting areas without need for additional treatment other than POBA or DCB
• No need for additional use of filters in cases with good run off (at least 2 tibial arteries)
• Long-term data are needed
Disclosure

Speaker name:

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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
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