Supera-First steps

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What questions are to answer

1) What lesion to treat
2) What are the options
3) What is the best option for this lesion
1) What lesion to treat
SFA Dynamics Vary Across Regions of the Artery

Region A
Region B
Region C
Region D
Hunter’s Canal

Bend / Kink
Compress / Slight Curve
Flexed
Bend / Kink

Video courtesy of Dr. Andrej Schmidt.
Modified from Lansky, A. Angiographic Analysis of Strut Fractures in the SIROCCO Trial. TCT 2004.
2) What are the options

- Plane old balloon-angioplasty
- Cutting / Scoring balloon
- Drug-eluting balloons

Atherectomy
2) What are the options

Nitinol-Stents
Drug-eluting stents
Covered stents (Viabahn, Begraft…)
3) What is the best option for this lesion
Kink Resistance

Standard Nitinol Stents

Supera®

Photos taken by and on file at Abbott Vascular
Retrospective Comparison of different Treatment-Modalities of the SFA

Restenosis rates up to 40 months after treatment

<table>
<thead>
<tr>
<th>Extremitäten</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMS</td>
<td>432</td>
</tr>
<tr>
<td>DCB</td>
<td>390</td>
</tr>
<tr>
<td>Supera</td>
<td>470</td>
</tr>
</tbody>
</table>

Propensity matched cohorts

Drug-Coated Balloon vs. Supera-Stent

Survival probability: primary patency

Lesion-length (mm):
- DCB: 157 ± 102
- Supera: 143 ± 92

Hazard ratio (95%CI): 0.49 (0.34-0.7)

S. Steiner, et al. JEVT 2016
Survival probability: primary patency

Hazard ratio (95%CI): 0.36 (0.27-0.47)

Lesion length (mm):
- **BMS**: 139 ± 100
- **Supera**: 130 ± 83

S. Steiner, et al. *JEVT* 2015
Comparison of Standard Nitinol Stents to Supera

Standard nitinol-stent

Supera stent
The “3 Keys” for Optimal Supera® stent Deployments

1. Pre-dilate
   - Match stent size 1:1 to vessel diameter
   - Do not oversize the stent

2. Size 1:1
   - Match stent size 1:1 to vessel diameter
   - Do not oversize the stent

3. Deploy Slowly
   - Magnify imaging to observe cell geometry
   - Use short, even throws of the thumb slide
   - Open the deployment lock and fully advance thumb slide to completely release the stent
   - Visually confirm stent detachment under fluoroscopy
   - Retract the tip and lock the thumb slide before withdrawal
   - Post-dilate as needed

Stent Outer Diameter

Recommended Inflated Balloon Diameter

5.5 mm
Supera Delivery-System
Supera Delivery-System
Key 3) Technique: Cell Geometry

- Optimal cell geometry is a result of appropriate vessel preparation, stent sizing and deployment technique. The benefits of the mimetic design are maximized when optimal cell geometry is achieved.

<table>
<thead>
<tr>
<th>Ideal</th>
<th>Not Optimal</th>
<th>Suboptimal: Associated with Reduced Patency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal diamonds</td>
<td>Compressed horizontal diamonds</td>
<td>• Vertical diamonds</td>
</tr>
<tr>
<td>Nominal</td>
<td>Compressed stent length</td>
<td>• Elongated stent length</td>
</tr>
<tr>
<td>2:1 width to height ratio</td>
<td></td>
<td></td>
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</tbody>
</table>

Ideal: Width : Height ~2:1

Not Optimal:

Suboptimal:

- Horizontal diamonds
- Nominal
- Compressed horizontal diamonds
- Compressed stent length
- Vertical diamonds
- Elongated stent length

~2X wider horizontally than the Height

Width : Height ~2:1
After 5mm ballooning
Supera-Stent for Calcified SFA-Lesions
Our Current Treatment-Algorithm for complex SFA-Lesions

Pre-Dilatation/Scoring Balloon of the SFA-lesion

- Recoil or Severe dissection
  - Drug Eluting Stent
    - In calcified lesions: High radial strength stent (SUPERA)

- Good result
  - Drug-eluting balloon
    - Spot stenting (SNS) if necessary
Thank you for your attention