Overview of Stents for SFA-Pop Lesions: Which is Best and When: Value of Local Adventitial Anesthesia and the Presto Technique to Assure Optimal Supera Stent Delivery

A. Schmidt, MD
Clinic for Angiology
University Hospital Leipzig
Germany

New Generation Nitinol-Stents: Fracture-Rates

<table>
<thead>
<tr>
<th>Study / Stent</th>
<th>X-Rate %</th>
<th>Lesion-Length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete SE (Laird JEVT 2014)</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td>Misago II (Schulte JEVT 2012)</td>
<td>3.1</td>
<td>64</td>
</tr>
<tr>
<td>Zilver-PTX RCT (Dake CCI 2011)</td>
<td>0.9</td>
<td>66</td>
</tr>
<tr>
<td>Summit: Epic-stent (Veenstra JVT 2013)</td>
<td>0</td>
<td>70</td>
</tr>
<tr>
<td>4-Ever: Pulsar 18/Astron (Bosiers JEVT 2013)</td>
<td>4.2</td>
<td>71</td>
</tr>
<tr>
<td>Resilient: LifeStent (Laird CCI 2010)</td>
<td>3.1</td>
<td>71</td>
</tr>
<tr>
<td>Durability II: EverFlex (Matsumura JVS 2013)</td>
<td>0.4</td>
<td>89</td>
</tr>
<tr>
<td>4-Ever: Bosiers et al. JEVT 2013</td>
<td>2.3</td>
<td>71</td>
</tr>
<tr>
<td>Durability I: Bosiers et al. JEVT 2009</td>
<td>8.1</td>
<td>96</td>
</tr>
<tr>
<td>Maris German Registry (Krankenberg JVT 2014)</td>
<td>17.8</td>
<td>230</td>
</tr>
<tr>
<td>LifeStent TASC C/D (Bosiers JVS 2015)</td>
<td>6.0</td>
<td>242</td>
</tr>
</tbody>
</table>

New Generation Nitinol-Stents Capable to Overcome Severe Calcification?

- In SFA stent-studies calcification is no exclusion-criteria
  (4-Ever, Durability I/II/200, Zilver-PTX RCT, Misago II, Resilient, FAST, Maris German Multicenter Registry, Summit Epic-stent)

- Resilient definition of severe calcification
- Calcification on both sides of the artery

Disclosure
Speaker name: Andrej Schmidt
I have the following potential conflicts of interest to report:
Consulting:
Abbott, Boston Scientific, Cook, Cordis, C.R.Bard, Intactvascular, ReFlow Medical, Upstream Peripheral
What is Severe Calcification of the SFA?

Standard Nitinol-Stent in a Severely Calcified femoro-Popliteal Lesion

Re-occlusion 1 months after PTA

New Generation Stents with increased Radial Force / High Flexibility

The Supera implant has 20 lb. compression resistance

Greater than 4x compression resistance

Standard Nitinol Stents 6.0 x 100 mm

Supera® 6.0 x 100 mm

Supera® 5.0 x 100 mm

Relining and Reinforcement with a Supera-Stent

6-months FU

Treatment of Severe Calcium with Supera

Acute and long-term result depends on vessel-preparation

With incomplete vessel-preparation, advantages of the Supera may be lost

Local Adventitial Anaesthesia

9cm 21 Gauge needle

1% Lidocaine

Every 2-3 cm
The “Pave and Crack”-Technique
Rigorous predilatation can lead to perforation

The “Pave and Crack”-Technique
Rigorous predilatation can lead to perforation
First Viabahn, then intentional cracking
Relining with Supera

Supera-Stent for the proximal or ostial SFA, the Problem of Foreshortening
Precise implantation rather unpredictable

The PRESTO-Technique
Precise REtrograde Supera STenting of the Ostium of the SFA for Complex Fem-Pop CTOs

Conclusion
- To favor one specific stent is currently difficult to justify except maybe for a not infrequent subgroup, - the severely calcified lesion.
- Unfortunately especially in calcified lesions the implantation of a Supera-stent can be challenging
- Techniques like local adventitial anaesthesia, the “PRESTO”-technique and the “pave-and crack”-technique can be helpful.