Combination of Supera/DCB in revascularization of femoro-popliteal occlusive disease. Single center experience

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Disclosure

Speaker name:
Anish J. Thomas

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
Background

• There are significant limitations with DCB in long femoropopliteal lesions
  • Decreased patency
  • Increased use of ‘bail out’ stent to the magnitude of 25%-50% in lesions >20 cm
• The combination of DCB with use of bare metal nitinol stents is appealing
  • DEBATE SFA
  • DEBAS
  • BIOLUX4EVER
• Limited data with use of DCB with Supera stents
  • RAPID (Very Surprising with significantly lower patency rates even in the Supera stent arm)
Supera stents

Compared to standard nitinol stents

- Significantly higher radial strength
- Almost no chronic outward radial force
- Virtually non existent stent fracture rates

Stent sizing, vessel preparation and stent deployment is critical to ensure that the above properties of the stent are maintained to achieve the best patency rates
Case

63/M, Diabetic, Rutherford class 3 claudication

35 cm occlusion

Post revascularization. Supera +SNS at ostium

9 months

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Study

• Physician initiated, single center, retrospective review of cases from July 2015 to Dec 2016 that were treated with DCB angioplasty and Supera nitinol interwoven stents
• Lesions were pre treated with DCB (In.Pact DCB, Lutonix DCB)
• Meticulous attention was paid to appropriate vessel preparation prior to stenting
• Dual anti platelet therapy for ATLEAST 3 months
• Patency rates were assessed at 6 and 12 months by duplex ultrasound.
• Significant stenosis defined as PSVR of > 2.5
STUDY

44 PATIENTS

6 MONTH FOLLOW UP

40 PATIENTS

12 MONTH FOLLOW UP

29 Patients

4 Patients lost to follow up

8 Patients expired
3 Patients lost to follow up

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## Patient Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>Mean 69 (47-96)</td>
</tr>
<tr>
<td>Gender (male)</td>
<td>65%</td>
</tr>
<tr>
<td>Diabetes (%)</td>
<td>78%</td>
</tr>
<tr>
<td>CKD (GFR &lt; 60)</td>
<td>63%</td>
</tr>
<tr>
<td>ESRD on HD</td>
<td>10%</td>
</tr>
<tr>
<td>CAD</td>
<td>55%</td>
</tr>
<tr>
<td>CLI</td>
<td>70%</td>
</tr>
</tbody>
</table>
## Procedure/Angiographic characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcification (Mod-Severe)</td>
<td>72%</td>
</tr>
<tr>
<td>Chronic total occlusion</td>
<td>80%</td>
</tr>
<tr>
<td>Runoff:</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>12.5%</td>
</tr>
<tr>
<td>1Vessel</td>
<td>47.5%</td>
</tr>
<tr>
<td>2 Vessel</td>
<td>22.5%</td>
</tr>
<tr>
<td>3 Vessel</td>
<td>17.5%</td>
</tr>
<tr>
<td>Mean Stented Length</td>
<td>256 mm (75-480 mm)</td>
</tr>
<tr>
<td>Inflow intervention</td>
<td>20%</td>
</tr>
<tr>
<td>Outflow intervention</td>
<td>45%</td>
</tr>
<tr>
<td>In.PACT/Lutonix</td>
<td>68%/32%</td>
</tr>
</tbody>
</table>

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Sample Case
6 Month Duplex Follow up

- Primary Patency: 95% (38/40)
  - One case of Acute stent occlusion after the 1st week (Patient non compliance with DAPT) Underwent Fem-Pop bypass
  - One case of stent occlusion noted at 6 month follow up. Wound healing achieved. Following inflow intervention on the same patient did not have significant claudication
  - No other cases of significant ISR noted (PSVR 2.5)
12 Month Duplex follow up

• Primary Patency 86%
  • One had focal severe ISR
    (ISR was noted in the ostial to proximal
    that had a standard nitinol stent)
  • One addition stent occlusion. Possibly
    secondary to progression of disease in
    the proximal SFA segment that was not
    treated on the index procedure
## Stent compression/elongation

<table>
<thead>
<tr>
<th></th>
<th>Cases</th>
<th>Average Compression/ Elongation ( %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compression</td>
<td>36</td>
<td>10.7%</td>
</tr>
<tr>
<td>Elongation</td>
<td>2</td>
<td>7.3%</td>
</tr>
<tr>
<td>Nominal</td>
<td>2</td>
<td>0%</td>
</tr>
</tbody>
</table>

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Conclusion

• The combination of DCB angioplasty prior to stenting is beneficial in long femoropoplital occlusive disease
• If using the Supera stent platform:
  • Need to be meticulous with vessel preparation prior to deployment
• Our results showed the above treatment strategy yielded excellent results in challenging anatomy and patient subset
• The ideal duration for dual anti platelet therapy needs to be determined.
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