Real world results with the Supera stent: Importance of proper artery prep and deployment technique

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Disclosures
Abbott
Consulting

Saint Louis University Experience with Interwoven Nitinol Stenting in Femoral-Popliteal Lesions

- Retrospective review
  - April 2010 and December 2011
- 54 limbs in 48 patients
- Mean follow up of 27.5 ± 12.3 months
- Median follow up of 30 months
- Clinical follow up: clinical interview, ABIs, and duplex US

Brescia, et al., Stenting of femoropopliteal lesions using interwoven nitinol stents
Journal of Vascular Surgery
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Lesion characteristics and patency

- Excellent overall patency rates
- Notably high in TASC II C/D lesions

Brescia, et al., Stenting of femoropopliteal lesions using interwoven nitinol stents

Overall patency by lesion length

Mean follow up of 27.5 months

<table>
<thead>
<tr>
<th>Lesion Length</th>
<th>&lt; 15 cm (n=18)</th>
<th>15 - 30 cm (n=28)</th>
<th>&gt; 30 cm (n=18)</th>
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<tbody>
<tr>
<td>Primary patency</td>
<td>72.3% (13)</td>
<td>83.3% (23)</td>
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<td>Primary assisted patency</td>
<td>88.9% (16)</td>
<td>88.9% (24)</td>
<td>88.9% (16)</td>
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<td>Secondary patency</td>
<td>94.4% (17)</td>
<td>88.9% (14)</td>
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Patency rates did not drop with increased lesion lengths

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Kaplan Meier analysis of all patients

Primary Patency
Secondary Patency

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<td>Primary patency</td>
<td>85.5% at 12 months</td>
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<td>Secondary patency</td>
<td>93.9% at 12 months</td>
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Kaplan Meier analysis of all patients

Primary Patency
Secondary Patency
Stent Deployment Technique

- Do not oversize the stent
- Slow extrusion of the stent out of the delivery catheter
- Repetitive, intermittent, forward pressure on the delivery catheter to achieve full expansion and avoid elongation of the stent
- Anticipate potential for elongation in areas of calcification or areas that were resistant to balloon angioplasty
- “Stack” or compress the stent in short areas directly proximal or distal to any area that may elongate

Elongated deployment impacts clinical outcomes: SUPERB Trial freedom from TLR at 1, 2, and 3 years

Keys to good results

- Good vessel preparation
  - Angioplasty with balloon equal or greater than the outer diameter of the Supera stent
  - Repeat angioplasty for resistant lesions/calcifications
  - May consider atherectomy for preparation of the vessel in rare cases
  - Take the time and use the pressures needed to achieve good vessel prep