Conformability and dissection, is it important?

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Disclosure

Speaker name:

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
Conformability in Stent Grafts?

• Adequacy of contact between material and landing zone, independently of anatomic characteristics
• Rigidity of stents
• Amount of radial force
What are we trying to protect against by improved graft conformability?

• Retrograde Type A dissection (proximal SINE)

• Bird beaking
  • Endoleak
  • Graft collapse

• Distal stent induced new entry tears (SINE)
Retrograde Type A Dissection

- 2.5% risk following TEVAR

Risk Factors
- Dissection
  - 5.1% vs. 0.66% following TAA
- Proximal bare metal stent
  - 2.3% vs 1.2%
- Landing zone
  - Zone 0 – 8.1%
  - Zone 1 – 2.5%
  - Zone 2 – 2.6%
  - Zone 3 and 4 – 0.67%
- ? Oversizing
- Stent graft length <165mm
- Longitudinal connective bars (spring back force)
- Connective tissue disease
Bird Beaking

• > 5mm gap between aortic wall and stent
• Greatest test of conformability?
• Migration
• Endoleak
• Graft collapse

Risk Factors
• <50 degree angulation
• Smaller neck diameter
Stent Induced New Entry Tears - SINE

• Up to 25% of cases
• ~80% distal

Risk Factors
• Chronic Type B dissection
• Excessive over-sizing distally
• Longitudinal connective bars (‘spring back’ force)
• ? Stent radial force
• Marfan’s disease
Why I like the GORE® TAG® Conformable Thoracic Stent Graft with ACTIVE CONTROL System

Retrograde Type A

• Partially covered proximal stent
• Minimal effect on aortic shape / little to no ‘spring back’ force
Why I like the GORE® TAG® Conformable Thoracic Stent Graft with ACTIVE CONTROL System

**Bird Beaking**

- 21mm smallest diameter stent
- Can snug inner curve down
- IFU angulation 20mm LZ at 60 degrees (longer for < 60)
Why I like the GORE® TAG® Conformable Thoracic Stent Graft with ACTIVE CONTROL System

**Distal SINE**

- Tapering grafts
- Little to no ‘spring back’ force
- Minimal effect on aortic shape
- Low radial force

- 4% incidence (GREAT registry)

<table>
<thead>
<tr>
<th>Device</th>
<th>Radial force (N)</th>
<th>p-Value</th>
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<td>c-TAG&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1.14 ± 0.03</td>
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<tr>
<td>Relay&lt;sup&gt;2&lt;/sup&gt;</td>
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References


