Update On PETTICOAT TEVAR For TBADs: Why The Addition Of A Distal Bare Dissection Stent To A Proximal Covered Stent Facilitates Treatment And Improves Outcomes

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Disclosure

• Consultant:
  – Cook medical
  – Medtronic
  – Endologix

TBAD Goals

- Treat rupture
- Restore flow to Malperfused Vascular Beds
- Minimize Complications
- Facilitate Positive Aortic Remodeling

TEVAR FOR TBAD

HOT ITEMS

- 30 day Mortality
- Stroke
- Paraplegia
- Remodeling
- False lumen Status

TEVAR Goals

Early Goals
- Mortality
- Stroke
- Paraplegia

Late Goals
- Positive Remodeling
- False lumen regression

One Shot

Multiple Opportunities
**Dual Component System**

- Zenith TX2 Dissection Endovascular Graft
  - Stentless dual-radiant
  - Pliable and low-profile

- Zenith Dissection Endovascular Stent
  - True lumen support
  - Diameter: 36 and 46 mm
  - Multiple lengths

**Caution - Investigational device. Limited by Federal (or United States) law to investigational use.**

- Primary tear coverage
- Stainless steel z-stent
- Pro-Form
- Tapered and non-tapered

- Nitinol z-stent
- Diameters: 36 and 46 mm
- Multiple lengths

**Key Outcomes 0-30 Days**

<table>
<thead>
<tr>
<th>STABLE I</th>
<th>Acute (N = 55)</th>
<th>Mortality 5.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stroke</td>
<td>10.9%</td>
</tr>
<tr>
<td></td>
<td>MI</td>
<td>Not reported</td>
</tr>
<tr>
<td></td>
<td>Paraplegia or paraparesis</td>
<td>1.8%</td>
</tr>
<tr>
<td></td>
<td>Bowel ischemia</td>
<td>1.8%</td>
</tr>
<tr>
<td></td>
<td>Renal failure requiring dialysis</td>
<td>10.9%</td>
</tr>
</tbody>
</table>


**STABLE II**

<table>
<thead>
<tr>
<th>Acute (N = 73)</th>
<th>SVS Dataset²</th>
<th>Acute, complicated (N = 85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.8% (5/73)</td>
<td>5.5%</td>
<td>10.6%</td>
</tr>
<tr>
<td>6.8% (5/73)</td>
<td>10.9%</td>
<td>9.4%</td>
</tr>
<tr>
<td>1.4% (1/73)</td>
<td>Not reported</td>
<td>1.2%</td>
</tr>
<tr>
<td>5.5% (4/73)</td>
<td>1.8%</td>
<td>9.4%</td>
</tr>
<tr>
<td>1.4% (1/73)</td>
<td>1.8%</td>
<td>3.5%</td>
</tr>
<tr>
<td>6.8% (5/73)</td>
<td>10.9%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>


**Device Combinations**

- Covered stent-graft main body
  - Most patients (70%) received only one component

- Dissection Stent
  - Placed in 79% of patients
  - Of 15 patients who did not receive a Dissection Stent
    - Main reasons were limited dissection and absence of false lumen flow
    - Most (10/15) presented with rupture alone
“TEVAR alone” VS Petticoat Remodeling

- TEVAR alone: 45 pts
- Petticoat (STABLE 1): 39 pts
- TEVAR alone positive remodeling thoracic aorta.
- Both demonstrated growth in AA
- Petticoat:
  - minimized FL area AA
  - significant + remodeling of visceral aorta.

Active True Lumen Expansion

Decreased False Lumen Volume

30-Day Mortality and Morbidity

Malperfusion-related mortality was defined as deaths caused by bowel/mesenteric ischemia or multiple organ failure.
Conclusions

Compared to TEVAR Alone:

- Petticoat concept provides
  - Decreased Mortality
  - Decreased Paraplegia rates
  - Long term management options with revintervention.