Fenestrated and Branched Grafts to Treat Thoracoabdominal Dissections

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RESULTS

- In-hospital mortality: 11.6% in group 1 vs 5.6% in group 2 (RR = 0.481 [0.17-1.36]; p = 0.09)
- Spinal Cord Ischemia: 14% vs 1.2% (RR = 1.148 [1.016-1.296]; p < 0.001)

Disclosures

- Research support, Consulting
  - Cook Medical, GE Healthcare
ISSUES?

- Challenging procedures
- Radiation exposure
- Durability
- Availability
- Learning curve / Volume
  - Unsuitable anatomies
- Cost

Challenging Anatomies

- Proximal and Distal Sealing
- Narrow true lumen
- Target vessels perfused by false lumen
50 yo patient

Step 1 (2009): Acute type A dissection with ascending aortic replacement

Step 2 (2013): Redo sternotomy
  - Tirone David + Arch repair and elephant trunk

Step 3 TEVAR (2013)

Step 4 Aorto Bi-Iliac Open Repair

Goal:
  Perfusion of
  - Both Internal Iliac
  - Distal lumbar arteries

Step 3: TEVAR from Elephant Trunk and CT

Step 5: Fenestrated Endograft
Small tear in front of the right renal
Expansion of true lumen

Post TEVAR

Post FEVAR

Post operative type 1b-2 endoleak
Post Type A Repair

1 month CT scan  1 year CT scan

1 month CT scan  1 year CT scan

1 month CT scan  1 year CT scan

Major adverse events n (%)  In-hospital mortality n (%)  Spinal cord ischemia n (%)  Secondary procedures n (%)  Type 1 endoleak n (%)  Type 3 endoleak n (%)

Aortic arch aneurysm (n=7)

2 (28.5%) 1 (14%) 0 (0%) 2 (28.5%) 1 (14%) 0 (0%)

TAAA (n=16)

3 (19%) 1 (6%) 1 (6%) 0 (0%) 1 (6%) 1 (6%)

Total (n=23)

5 (22%) 2 (8.7%) 1 (4.4%) 2 (8.7%) 2 (8.7%) 1 (4.4%)

EJVES 2015
CONCLUSIONS

- Simple to very complex
- 3D WS analysis
- No compromise

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<thead>
<tr>
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<th>Nicaragua</th>
<th>Spain</th>
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<tbody>
<tr>
<td>N of patients</td>
<td>6</td>
<td>15</td>
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<tr>
<td>Median age</td>
<td>52 (16-75)</td>
<td>54 (35-75)</td>
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<td>Length of hospital stay</td>
<td>20 (10-47)</td>
<td>21 (10-47)</td>
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<td>Arch involvement</td>
<td>0</td>
<td>1 (7%)</td>
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<td>Previous aortic surgery (including TEVAR)</td>
<td>NA</td>
<td>12 (89%)</td>
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<tr>
<td>Median left to left graft (mm)</td>
<td>10 (5-31)</td>
<td>31 (4-210)</td>
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<td>Median time (s) elapsed between graft and distal anastomosis</td>
<td>284 (20-460)</td>
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<td>Reopen procedure (50 mm only)</td>
<td>NA</td>
<td>76%</td>
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<td>Technical success</td>
<td>100%</td>
<td>NA</td>
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<td>Renal function</td>
<td>0</td>
<td>8</td>
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<tr>
<td>Mean FU (months)</td>
<td>9.3 (1-50)</td>
<td>28 (1-122)</td>
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