CMD vs off-the-shelf multibranched endografts for endovascular repair of thoracoabdominal aortic aneurysms

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Disclosures

Speaker name:

**Theodosios Bisdas**

I have the following potential conflicts of interest to report:

- [ ] Consulting
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [X] Other(s)
Custom-made endografts

Manufacturing > 6-8 weeks

Not available for symptomatic or ruptured TAAAs
Off-the-shelf multibranched endografts
T-branch (COOK Medical)
Off-the-shelf versatility

Spiral-Z™ Leg

Universal Distal Body

22 mm

81, 98, 115, 132 mm

t-Branch
Instructions for use

Accomodates 22Fr delivery system (>8.5 mm)
Planning
Münster applicability: 63%

San Francisco, Calif applicability: 58%

J Endovasc Ther 2013;20:672-77

Custom-made versus off-the-shelf multibranch endografts for endovascular repair of thoracoabdominal aortic aneurysms

Custom made vs off-the-shelf
Study cohort

2010-2013
71 patients with mbEVAR*

Inclusion criterion:
mbEVAR with four branches

46 patients

CMD mbEVAR
24 patients (52%)

t-branch
22 patients (48%)

*mbEVAR: multibranched endograft
## Characteristics and demographics

<table>
<thead>
<tr>
<th></th>
<th>CMD br-BEVAR (4 branches)</th>
<th>t-branch N=22</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N=24</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (mean, years)</td>
<td>71±6</td>
<td>70±8</td>
</tr>
<tr>
<td>ASA Score 4</td>
<td>19 (79%)</td>
<td>16 (73%)</td>
</tr>
<tr>
<td>Crawford I</td>
<td>2 (8%)</td>
<td>0</td>
</tr>
<tr>
<td>Crawford II</td>
<td>4 (17%)</td>
<td>9 (41%)</td>
</tr>
<tr>
<td>Crawford III</td>
<td>9 (38%)</td>
<td>12 (55%)</td>
</tr>
<tr>
<td>Crawford IV</td>
<td>9 (38%)</td>
<td>1 (4%)</td>
</tr>
<tr>
<td>Post-dissection TAAA</td>
<td>1 (5%)</td>
<td>2 (10%)</td>
</tr>
<tr>
<td>Symptomatic TAAA</td>
<td>1 (5%)</td>
<td>3 (15%)</td>
</tr>
</tbody>
</table>

*No statistically significant differences between the comorbidities of the cohorts*
Results

Mean follow-up time for **CMD br-EVAR**: 13±11 months
Mean follow-up time for **t-branch**: 6±3 months

<table>
<thead>
<tr>
<th></th>
<th>CMD br-EVAR N=24</th>
<th>t-BRANCH N=22</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical success</td>
<td>100%</td>
<td>100%</td>
<td>.99</td>
</tr>
<tr>
<td>Survival rate</td>
<td>71%</td>
<td>94%</td>
<td>.04</td>
</tr>
<tr>
<td>Freedom from reintervention</td>
<td>100%</td>
<td>90%</td>
<td>.07</td>
</tr>
<tr>
<td>Branch occlusion</td>
<td>0% (0/96)</td>
<td>5% (4/88)</td>
<td>.10</td>
</tr>
<tr>
<td>Paraplegia</td>
<td>1 (4%)</td>
<td>1 (5%)</td>
<td>.51</td>
</tr>
</tbody>
</table>

*Fischer exact test for categoric variables and log-rank test for survival and freedom-from-reintervention rate*
Occlusion of the renal branches

PATIENT

1

2

3

Courtesy: G. Panuccio
Treatment of branch occlusion

Rotarex, Straub Medical

Bisdas et al. J Vasc Surg 2014;60(5):1186-95
Conclusions

• Applicability of the t-branch endograft: 63%
• Technical success: 100%
• Comparable performance to CMD br-EVAR
• Reasons for renal branch occlusion should be further investigated – dedicated bridging endograft?
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