The value and limitations of the new lower profile devices for TEVAR

Giovanni Torsello
University of Münster

e-mail: giovanni.torsello@sfb-muenster.de
home page: www.gefaesschirurgie-muenster.de

Reason for unsuitability
- Access issues: 20-30% -

Conflicts of interest
Consultant/Honorarium:
Medtronic
Cordis
Cook

Size of introduction system for current thoracic devices is 20-25 French

<table>
<thead>
<tr>
<th>Company</th>
<th>Device</th>
<th>Metal</th>
<th>Coating</th>
<th>Tapered</th>
<th>Free flow</th>
<th>Outer diameter of delivery system (Fr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medtronic</td>
<td>Valiant</td>
<td>Nitinol</td>
<td>Polyester</td>
<td>Yes</td>
<td>Proximal</td>
<td>20 – 25</td>
</tr>
<tr>
<td>Gore</td>
<td>TAG</td>
<td>Nitinol</td>
<td>ePTFE</td>
<td>No</td>
<td>No</td>
<td>N/A*</td>
</tr>
<tr>
<td>Cook</td>
<td>Zenith</td>
<td>Stainless steel</td>
<td>Polyester</td>
<td>Yes</td>
<td>Distal</td>
<td>25 – 25</td>
</tr>
<tr>
<td>Duke Vascular</td>
<td>TA Augot</td>
<td>Nitinol</td>
<td>ePTFE</td>
<td>Yes</td>
<td>Proximal</td>
<td>22 – 24</td>
</tr>
<tr>
<td>Jotec</td>
<td>Evita</td>
<td>Nitinol</td>
<td>Polyester</td>
<td>Yes</td>
<td>Prox-Distal</td>
<td>20 – 24</td>
</tr>
<tr>
<td>Bolton</td>
<td>Relay</td>
<td>Nitinol</td>
<td>Polyester</td>
<td>Yes</td>
<td>Proximal</td>
<td>22 – 25</td>
</tr>
</tbody>
</table>

Profile of the Zenith TX2 and of the new Zenith Alpha Endograft

Increased applicability of TEVAR

Based on M2S anatomical data for 120 cases in the U.S.
Regimens were investigated for all specialties and regions.
TEVAR attempted with other graft
Restenosis of the right iliac artery
Wound infection left groin

Angiography after TEVAR and PTA of the right iliac artery

Aneurysm Exclusion with Zenith Alpha

Comparison between Zenith Alpha and other stent-grafts

167 consecutive patients with TAA between 8/2010 and 10/2015:
- Zenith Alpha (n=84)
- Other thoracic stent grafts (n=83)

Emergency treatment in 37 patients!

Results

- Technical success: 94%, 91%
- Mortality: 8%, 3%
- Sec. Procedures: 6%, 18%

Minimum diameter and tortuosity of the iliac arteries

<table>
<thead>
<tr>
<th></th>
<th>Alpha</th>
<th>Other endografts</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iliac tortuosity</td>
<td>1,34</td>
<td>1,25</td>
<td>0,022</td>
</tr>
<tr>
<td>Min. iliac diameter</td>
<td>5,07</td>
<td>6,65</td>
<td>0,002</td>
</tr>
</tbody>
</table>

Greater share of female pts. (36% vs 27%)
Results

Fewer access vessel complications (3 vs. 12%)

Conclusions

- Our experience with a non-preselected patient cohort:
  - adequate mid-term results
  - fewer access-related complications
  - Inclusion of pts with more demanding access vessel anatomy

- Further questions
  - Different deployment mechanics in aortic arch?
  - Long-term performance?

Thank you!

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Universitätsklinik Münster St. Franziskushospital Münster