Branched endografts for thoracoabdominal aneurysms

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Disclosure

Speaker name: Marc van Sambeek

I have the following potential conflicts of interest to report:

Consulting and speakersfee
- WL Gore & Associates
- Medtronic

Unrestricted research grants
- Medtronic
- W.L Gore & Associates
- Philips Medical Systems
Thoracic aneurysms

Ascending Aorta

TEVAR
Thoracic aorta pathology

Classification of aortic dissection

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Type</th>
<th>Stanford</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
<td>DeBakey I</td>
<td>A (Proximal)</td>
</tr>
<tr>
<td>10–15%</td>
<td>DeBakey II</td>
<td>B (Distal)</td>
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<tr>
<td>25–30%</td>
<td>DeBakey III</td>
<td></td>
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</tbody>
</table>

TEVAR
Advanced thoracic techniques

Chimney technique

Branched thoracic endograft
Thoracoabdominal aneurysm

Type I
Type II
Type III
Type IV
Thoracoabdominal open surgery
FEVAR and BEVAR

**FENESTRATIONS**
- No stent
- Bare metal stent
- Covered stent
- Ideal covered stent Complete flair

**BRANCHES**
- Wallgraft
- Fluency + Self-expandable bare metal stent
- Viabahn ± Self-expandable bare metal stent
- Ideal branch Complete flair
Chimney, snorkels and periscopes
Technique of BEVAR
Technique of CHEVAR (alternative)
Complications

Paraplegia
Stroke
Organ ischemie
Contrast nephropathy
Access related complications
Bleeding

Branch occlusion
Spinal cord injury is thought to result from ischemia (as well as subsequent reperfusion) Spinal cord edema as a result of reperfusion injury can increase cerebrospinal fluid pressure
Staged procedure
Spinal fluid drainage

TEVAR

Post-op neurologic assessment every 2 hrs x 4, then every 4 hrs

Normal neurologic exam

Neurologic deficit

1. ICU monitoring
2. Increase MAP to > 110 mmHg
3. Discontinue medications interfering with neurologic exam
4. Increase frequency of neurologic exams to every 1 hour

>= 4/5 motor function or insignificant sensory change

MRI (if possible)

Resolution within 2-3 hours

Routine post-op management

Continue ICU monitoring at physician’s discretion

<4/5 motor function or significant sensory change

Lumbar drain placement

Monitor intrathecal pressure and drainage volume

No resolution within 2-3 hours

Discontinue drainage at neurologic plateau
There are several options to treat a thoracoabdominal aneurysm.

Branched endograft technique (BEVAR) is a minimal invasive alternative for open surgery.

Current results are promising, but long term outcomes should be awaited.
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