How I plan and perform fenestrated aortic endografting and how I flare the viscero-renal grafts to prevent type III endoleaks

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Disclosures

• Research support, Consulting, IP
  – Cook Medical, GE Healthcare, Bentley
Anatomical Evaluation

Target vessels: CT

Diameter 7 mm

28 mm
Anatomical Evaluation: SMA
Anatomical Evaluation: Renals
Endograft components

Balloon-expandable covered stents

<table>
<thead>
<tr>
<th>Target artery</th>
<th>Preloaded fenestration</th>
<th>Shaft length</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC</td>
<td>No</td>
<td>75</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>SMA</td>
<td>No</td>
<td>75</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>RRA</td>
<td>Yes</td>
<td>120</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>LRA</td>
<td>Yes</td>
<td>120</td>
<td>7</td>
<td>23</td>
</tr>
</tbody>
</table>
REINFORCED LARGE PNEUMATIZATION

- Gold Markers

**Diameter:** 8mm
DIST FROM PROX EDGE: 41mm
CLOCK: 12:30
MD: 22mm

**Reinforced Large Pneumatisation #2**

**Diameter:** 8mm
DIST FROM PROX EDGE: 68mm
CLOCK: 12:00
MD: 24mm

**Reinforced Small Pneumatisation #1**

**Diameter:** 6mm
DIST FROM PROX EDGE: 68mm
CLOCK: 2:00
MD: 22mm

**Reinforced Small Pneumatisation #2**

**Diameter:** 6mm
DIST FROM PROX EDGE: 71mm
CLOCK: 9:15
MD: 21mm

- Single diameter reducing ties
- Low profile fabric

***MODIFIED PRELOADED DELIVERY SYSTEM***
(Rifort handle and preloaded catheters)

Pav: AAA-BIFURCATED-GRaFT
(As per ZHER016-45-04)
Contralateral Leg Extension:
ZSLE-16-56-ZT
Faile to Catheterize?
COMPLETION CBCT
New installation & new CBCT

- LATERAL
- 200° spin
- 40°/sec
- 150 images
TrackVision Needle Trajectory Planning
<table>
<thead>
<tr>
<th>Endoleak Type</th>
<th>All n = 467 *</th>
<th>&lt; 30 days n = 467 *</th>
<th>&gt;30 days n = 427</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1A</td>
<td>37 (7.9)</td>
<td>3 (0.6)</td>
<td>36 (8.4)</td>
</tr>
<tr>
<td>Type 1B</td>
<td>6 (1.3)</td>
<td>0</td>
<td>6 (1.4)</td>
</tr>
<tr>
<td>Type 1C</td>
<td>2 (0.4)</td>
<td>1 (0.2)</td>
<td>1 (0.2)</td>
</tr>
<tr>
<td>Type 2</td>
<td>13 (2.8)</td>
<td>0</td>
<td>13 (3.0)</td>
</tr>
<tr>
<td>Type 3</td>
<td>14 (3.0)</td>
<td>2 (0.4)</td>
<td>13 (3.0)</td>
</tr>
<tr>
<td>Combined endoleaks treatments **</td>
<td>5 (1.1)</td>
<td>0</td>
<td>5 (1.2)</td>
</tr>
</tbody>
</table>

**Freedom from late target vessel occlusion**

Follow-up (years)

![Graph showing freedom from late target vessel occlusion over follow-up years.](image_url)
Lille Experience – Results Update
FEVAR Exclusively

• 39 patients, 150 fenestrations
• 101 BeGrafts:
  - 46 in renal arteries
  - 55 in visceral arteries
Lille Experience – Results Update
FEVAR Exclusively – 101 BeGrafts

• One patient (2.6%) presented early bilateral renal occlusion (dissection + kidney hematoma)

• No early or late occlusion/stenosis in 38 patients (97.3%) at one year follow-up

• No type 3 endoleak
CONCLUSIONS

➢ 3D WS

➢ Proximal sealing zone

➢ Appropriate bridging stents

➢ CBCT