TECHNICAL TIPS FOR PLACEMENT OF AN IBD AFTER PRIOR EVAR

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DISTAL TYPE IB ENDOLEAKS

INTERNAL ILIAC ARTERY (IIA) preservation in patients with prior EVAR using the iliac branch endoprosthesis (IBE) with an ‘up-and-over’ transfemoral approach

DISCLOSURE

• Consulting fees (All paid to Mayo)
  - Cook Medical Inc., WL Gore, GE Healthcare

• Research grants (All paid to Mayo)
  - Cook Medical Inc., WL Gore, GE Healthcare

• Off label technique
  - Up and over IBD deployment

DISTAL TYPE IB ENDOLEAKS

ILIAC BRANCH DEVICES (IBDs)

BRACHIAL ACCESS

Up-and-Over Technique for Implantation of Iliac Branch Device After Prior Aortic Endograft Repair

- Internal iliac artery (IIA) preservation in patients with prior EVAR using the iliac branch endoprosthesis (IBE) with an ‘up-and-over’ transfemoral approach

Dawson et al., J Endovasc Ther 2018
‘UP-&-OVER’ IBE TECHNIQUE

- ‘Push & pull’ maneuver to avoid displacement of the bifurcated device
- Advancement of 8Fr Raabe sheath into side branch
- Catheterization of IIA
- Withdrawal and readvancement of Raabe sheath
- Stenting using balloon expandable covered stent
- Removal of the 12 Fr using the ‘push & pull’ maneuver or the dilator
- Placement of proximal extension into prior iliac limb

ANATOMICAL CRITERIA

- Avoid excessive iliac tortuosity
- Iliac limb diameter >16mm to allow expansion of iliac portal or branch
- >25mm length between distal edge of iliac limb to iliac bifurcation
53 patients (62 iliac aneurysms)

**Standard**
- n = 36 patients (43 IBEs)

**‘Up-&-over’**
- n = 17 patients (19 IBEs)

No difference in demographics, cardiovascular risk factors and anatomical measurements

**PROCEDURAL DATA**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall</th>
<th>Standard</th>
<th>‘Up-&amp;-over’</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n (n = number of patients)</td>
<td>53</td>
<td>36</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>Brachial access</td>
<td>4 (8)</td>
<td>3 (8)</td>
<td>1 (6)</td>
<td>0.78</td>
</tr>
<tr>
<td>Femoral percutaneous access</td>
<td>47 (89)</td>
<td>30 (83)</td>
<td>17 (100)</td>
<td>0.07</td>
</tr>
<tr>
<td>Amount of contrast used (ml)</td>
<td>140 ± 50</td>
<td>147 ± 55</td>
<td>140 ± 55</td>
<td>0.17</td>
</tr>
<tr>
<td>Total operating time (min)</td>
<td>46 ± 35</td>
<td>50 ± 41</td>
<td>44 ± 19</td>
<td>0.55</td>
</tr>
<tr>
<td>CFP (Gy/cm²)</td>
<td>125 ± 105</td>
<td>183 ± 144</td>
<td>158 ± 100</td>
<td>0.55</td>
</tr>
<tr>
<td>Estimated blood loss (ml)</td>
<td>305 ± 366</td>
<td>303 ± 422</td>
<td>194 ± 158</td>
<td>0.33</td>
</tr>
<tr>
<td>Femoral percutaneous access</td>
<td>47 (89)</td>
<td>30 (83)</td>
<td>17 (100)</td>
<td>0.07</td>
</tr>
<tr>
<td>Technical success</td>
<td>90 (86-93)</td>
<td>80 (71-100)</td>
<td>100 (90-100)</td>
<td>0.5</td>
</tr>
</tbody>
</table>

No 30-day or in-hospital mortality

**REINTERVENTIONS**

- Median follow up, 10 months

**PRIMARY PATENCY**

- 1-year

**BRANCH INSTABILITY**

- Any occlusion or reintervention for stenosis, endoleak or disconnection

**CONCLUSION**

- Type I B endoleak may require distal extension with iliac branch devices to preserve pelvic flow
- The procedure can be performed using either brachial or a transfemoral approach with the ‘up-&-over’ technique
- The ‘up-&-over’ technique is associated with high technical success and identical procedural metrics as compared to standard technique