Alternative Approach to Type II Endoleaks: Transfemoral Paragraft Approach

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Disclosure

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Potential conflicts of interest to report:

Consulting: Silk Road, Surmodics, Profusa, CSI, Cardinal, Terumo

Chief Medical Officer: Intact Vascular, Cagent, Vesper

Scientific Advisory Board: Abbott, Medtronic, Boston Scientific
Chronic Type II Endoleak After EVAR

• Most do not require treatment.
• When treatment is required
  – Occlusion of inflow and outflow vessels and sac obliteration
• How to access?
  – Transarterial: IMA, lumbar
  – Translumbar: CT guided sac puncture
  – Transcaval, trans-graft
  – Transfemoral/around the graft
Transfemoral/Paragraft
How To Do It

• Sheath support
• Which femoral to select?
• Angled catheter with stiff tip pointed at graft edge-artery interface
• Push with angle glidewire until embedded behind graft limb (think subintimal)
• Advance catheter
• Perform sac-o-gram
Type I Endoleak | Type II Endoleak
---|---
Intra-operative | No | Controversial
During Surveillance | Last choice | Reasonable option

Best strategy is to manage IMA and lumbar using trans-arterial embolization and obliterate the sac using embolization via CT-guided or transfemoral/para-graft approach. May be combined with thrombotic agents or glue.
Type II endoleak and Enlarging AAA

• 3 years ago-percutaneous EVAR for symptomatic 61mm AAA
  – Excluder 26mm x 14.5mm x 16cm (left)
  – Contralimb 16mm x 9.5cm (right)
• Exclusion left internal iliac: Amplatzers
• Type II endoleak, stable 2.5 years

• 9mm AAA growth over 6 months (now 7cm)
• L4-5 lumbar area, IMA not visualized
Right iliac bifurcation

Amplatzer in left internal iliac
Wire outside graft
Sheath in endoleaks sac

Endoleak with coils and occluders
Sac-o-gram
Transfemoral/Paragraft Results in Chronic Type II Endoleak

Modena experience with Trans-sealing

Among 1559 EVARs, 17 patients were treated

Coppi et al. Eur J Vasc Endovasc Surg 2014;47:394-401
### Transfemoral/Paragaft Results in Chronic Endoleak

<table>
<thead>
<tr>
<th>Endoleak</th>
<th>Pre</th>
<th>Post</th>
<th>Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 1</td>
<td>11</td>
<td>1</td>
<td>91%</td>
</tr>
<tr>
<td>Type 2</td>
<td>23</td>
<td>12</td>
<td>47%</td>
</tr>
</tbody>
</table>

T2E – 0% sac growth/reintervention

Average Follow up: 33.4 months

10.7% sac regression

7.1 % open conversion rate

UCSD/UCLA experience

Quinones-Baldrich J Vasc Surg 2014;52:538
Barleben A/Moganam A Western Vascular Society Sept, 2017
Alternative method of access to the sac for managing chronic Type II endoleak.

- Advantage: large bore, reach areas of the sac low and posterior
- Works best if IMA and lumbars already coiled
- May be combined with thrombotic agents
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