How to treat thrombosed (Occluded) AAAs and iliac arteries with bifurcated endografts

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A Comparison of the Mid-term Results Following the use of Bifurcated and Aorto-uni-iliac Devices in the Treatment of Abdominal Aortic Aneurysms

Jean-Baptiste E. et al. Eur J Vasc Endovasc Surg 2009

1 Year
2 Years
(A/B)*

Stent Graft Patency
100% (56/56)
98.1% (53/54)

Freedom from Endoleak
Type I
100% (56/56)
100% (54/54)

Type III
100% (56/56)
100% (54/54)

Freedom from Migrations
100% (56/56)
100% (54/54)

Freedom from Fracture
100% (56/56)
100% (54/54)

Freedom from Sac Enlargement
100% (56/56)
100% (54/54)

Freedom from Re-Intervention
96.4% (54/56)
94.4% (51/54)

Freedom from MAE
98.2% (55/56)
88.9% (48/54)

Endovascular treatment of iliac occlusions provides excellent early and long-term results, similar to those obtained in stenotic lesions


Early and long-term comparison of endovascular treatment of iliac artery occlusions and stenosis

Giovanni Pratesi, M.D.

I have the following potential conflicts of interest to report:

- Consulting: Abbott, Cook, Cordis, Medtronic, WL Gore & Associates
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)
- I do not have any potential conflict of interest

✓

Disclosure

Disclosure
AAA and occluded iliac arteries: endovascular management

How to treat:
Antegrade iliac intraluminal recanalization

AAA and occluded iliac arteries: how to treat?

How to treat:
Bifurcated endograft (Cordis InCraft)

AAA and occluded iliac arteries: how to treat?
How to treat:
retrograde iliac intraluminal recanalization

How to treat:
Bifurcated endograft (Endologix Nellix)

AAA and occluded iliac arteries: how to treat?

Demographics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>10 (76.9%)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>71.4 ± 9.2 aa</td>
<td></td>
</tr>
<tr>
<td>ASA class III/IV</td>
<td>14 (100%)</td>
<td></td>
</tr>
<tr>
<td>Smoker</td>
<td>8 (61.5%)</td>
<td></td>
</tr>
<tr>
<td>HTA</td>
<td>14 (100%)</td>
<td></td>
</tr>
<tr>
<td>Dyslipidemia</td>
<td>8 (61.5%)</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>2 (15.3%)</td>
<td></td>
</tr>
<tr>
<td>CAD</td>
<td>5 (38.4%)</td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>8 (61.5%)</td>
<td></td>
</tr>
<tr>
<td>Renal impairment</td>
<td>3 (23.1%)</td>
<td></td>
</tr>
</tbody>
</table>

Anatomical features

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximal aortic neck diameter (mm)</td>
<td>21.3±4.6</td>
</tr>
<tr>
<td>Proximal aortic neck length (mm)</td>
<td>20.4±13</td>
</tr>
<tr>
<td>Proximal aortic neck angulation (°)</td>
<td>18.1±13.1</td>
</tr>
<tr>
<td>Aortic aneurysm (mm)</td>
<td>53.1±10.7</td>
</tr>
<tr>
<td>Aortic bifurcation (mm)</td>
<td>21.2±4.2</td>
</tr>
<tr>
<td>Common iliac artery diameter (mm)</td>
<td>14.9±4</td>
</tr>
<tr>
<td>External iliac artery diameter (mm)</td>
<td>7.7±2.2</td>
</tr>
</tbody>
</table>

Mean length occlusion: 12.1 ± 4.7 cm
**Intraoperative**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical success</td>
<td>14 (100%)</td>
</tr>
<tr>
<td>Local anesthesia</td>
<td>12 (92.3%)</td>
</tr>
<tr>
<td>Bilateral pEVAR</td>
<td>12 (92.3%)</td>
</tr>
<tr>
<td>Intraluminal recanalization</td>
<td>8 (61.5%)</td>
</tr>
<tr>
<td>Subintimal recanalization</td>
<td>5 (38.5%)</td>
</tr>
<tr>
<td>Iliac stenting</td>
<td>14 (100%)</td>
</tr>
<tr>
<td>Conversion</td>
<td>-</td>
</tr>
<tr>
<td>Hospital stay</td>
<td>3.8±1.7 gg</td>
</tr>
</tbody>
</table>

**30–day outcomes**

- Iliac vessel patency: 14 (100%)
- Type I/III endoleak: -
- Type II endoleak: 3 (21.4%)
- Limb occlusion: -
- Reintervention*: 1 (7.1%)

*Popliteal artery occlusion in 1 PO day

**2-year outcomes**

- Mortality: 1 (7.7%)
- Type I/III endoleak: -
- Type II endoleak: 2 (14.2%)
- Limb occlusion: -
- Reintervention: -
- Iliac vessel patency: 14 (100%)

Mean follow-up: 12.9 ± 9.4

**Conclusions**

- Bifurcated EVAR in AAA patients with concomitant chronic iliac artery occlusion is feasible and associated with a high technical success rate and mid-term patency.
- Larger studies with longer follow-up observation are necessary to really evaluate the durability of this treatment modality.