F-EVAR after failed EVAR

Prof. Dr. P.M. Kasprzak
Department of Vascular, Endovascular Surgery
University Medical Center Regensburg
Conflict of Interest

- Piotr Kasprzak
  - Consultant for Cook
  - W.L. Gore & Associates
  - Bard
  - Maquet
  - Medtronic
  - Vascutek
F-EVAR after EVAR

60mm Aneurysm after EVAR
(type I endoleak)
Reasons for Failure after Open Surgery

• Type I Endoleak
• Migration
• Extension of Disease
F-EVAR after EVAR

Treatment with 3x F-EVAR
Technical Challenges

- Short working length (distance to bifurcation)
- Access problems
- Limited maneuverability
Fenestrated Stent-Grafts for Salvage of Prior Endovascular Abdominal Aortic Aneurysm Repair

A. Katsargyris, O. Yazar, K. Oikonomou, F. Bakkema, I. Tielliu, E.L.G. Verhoeven


- 26 Pt
- 92.3% Technical Success
- Operative Mortality 0%
- FU 26.8 ± 28.5 months
- 6 Late deaths (1 aneurysm related)

FEVAR after EVAR feasible but more technically challenging
Late rescue of proximal endograft failure using fenestrated and branched devices.

Martin Z1, Greenberg RK2, Mastracci TM1, Eagleton MJ1, O'Callaghan A1, Bena J3.

- 52 Pt
- 85% Technical Success
- Operative Mortality 3.8%
- Secondary Reinterventions 36.5%

F/B-EVAR after EVAR is more complex than repair in the native aorta.
Regensburg Experience F-EVAR
After previous surgery

- FEVAR for complex AAA 198
  (08/2006 – 01/2016)
  - After previous open surgery: 19 (9.6%)
  - After previous EVAR: 24 (12.1%)
  Total 43 (21.7%)
Personal Experience F-EVAR
After previous EVAR

- Mean Age: 73.7 ± 7.8
- Mean AAA diameter: 63.6 ± 13.9 mm
- Male / Female: 22/2
Distal Landing

After EVAR

Cuff  29.2%  (n=7)
Composite Bi-iliac  66.7%  (n=16)
Composite Uni-iliac  4.2%  (n=1)
<table>
<thead>
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<th>Target Vessel</th>
<th>Fenestration Type</th>
<th>Total</th>
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<td><strong>Fen.</strong></td>
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<td>CA</td>
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<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>
Operative Data

Technical Success 23/24 (95.8%)
– 1 CA catheterization failure
Operative Data

- OR Time: 253 ± 97 min
- Fluoroscopy Time: 55 ± 36 min
- Contrast Agent: 220 ± 73 ml
Perioperative Results

• 30-Day Mortality 0%

• Major Complications 8.3% (2/24):
  – 1 temporary paresis right limb
  – 1 deterioration of renal insufficiency, temporary dialysis
Perioperative Results

• Mean ICU Stay 2.3 ± 1.4d

• Mean Hospital Stay 18 ± 19 d
Follow-Up

• Mean Follow Up (32.26 ± 19M)

• Late Mortality

  – 5 Pts Aneurysm unrelated

  – 1 Pt initially treated for infected EVAR & progression, aortoduodenal fistula 3 months post-op
Follow-Up

8 (33.3%) Patients with Reinterventions

- 5 Type II endoleak:
  - 3 Coiling (2xIMA, 1x lumbar);
  - 2 laparoscopic IMA Clipping
- 1 Type I endoleak: Proximal Banding
- 1 Partial explantation: Infected Graft (Exitus letalis)
- 1 IBD left iliac
Follow-Up

Mean Aneurysm diameter (Dmax)

73.7 ± 7.8 mm → 50 ± 20 mm
Conclusions

• Feasible
• Low perioperative M/M
• High Technical Success
• Additional Technical Challenges
F-EVAR after F-EVAR

Initial Planning (2x F-EVAR)

CTA 18M Type Ia Endoleak SMA
F-EVAR after F-EVAR

Redo 4x F-EVAR
Conclusions

F-EVAR is a valuable option for the repair of failed previous EVAR.
F-EVAR after failed EVAR

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