Advantages and Limitations of Inner Branches in F/B EVAR

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  - Consultant
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  - Consultant

Fenestrations or Branches?

Fenestration
- 90 degree take-off
- Graft in contact/close to aortic wall
- Catheterisation from below

Branch
- Sharp take-off
- Larger space between graft and aortic wall
- Catheterisation from above

What to do with „non-suitable“ vessels?
Advantages of Inner Branches

- No Risk of squashing the Branch
  - Small diameter
  - Angulation
- Option to keep the main graft wide
  - Grafts with combination of F and B
- Cover less Aorta proximally

- Easier catheterization of Vessel?
  - Support of the „basket“ guides the catheter

Post-Dissection TAAA
Repair of previous FEVAR

Partial opening of graft...

Patients (N=43)
Main Reason for Inner Branches (N=63)

- Target Vessel Anatomy  N=38
- To keep main graft wide  N=34
- To start lower in Aorta  N=7
- Specials  N=2
- PS Combination of Reasons!  N=18
Stent-graft Design

• Inner Branches + Fenestrations  
  – N=59

• Inner Branches only  
  – N=4

Indwelling Wire
54/63 Inner Branches

<table>
<thead>
<tr>
<th>N of Indwelling wires</th>
<th>N of Inner Branches</th>
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Technical Details
Catheterization of Inner Branch/Target Vessel

• Technical Success: 100%

• Inner Branches  
  – With indwelling wire: N=52: all <1’  
  – Without indwelling wire: N=11: all >3’

• Target Vessels  
  – With fenestrations: N=49: all <1’  
  – Only inner branches: N=14: (<1’: N=3; 1’-3’: N=4; >3’:N=7)

Follow-up
Mean: 14 months (2-26 months)

• Target Vessel Occlusion: N=5 (7.9%, in 4 patients)  
  - all in renal arteries  
  - 2/5 in grafts with branches only  
  - 4/5 in vessels with 5mm bridging stentgraft

Oclusions (N=5)
Details

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<tr>
<th>CA</th>
<th>SMA</th>
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<th>LRA</th>
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<td>8</td>
<td>5</td>
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<td>TOTAL</td>
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LRA Occlusion:  
Suboptimal Orientation of the Graft? (4 inner branches)
Limitations

- Manufacturing with regard to Position
  - Have to fit inside existing Z-Stents

Conclusions

- Interesting third option
  - Combination of inner Branch(es) with fenestrations
  - Avoid graft with inner branches only!