TAAA endo: when to use fenestrations and when to use branches?

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Senior consultant and Leader of section „endovascular aortic therapy“
TAAA endo – FEVAR or BEVAR?

Disclosures:

Proctor Cook™ Company

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male, 61 Y, AFB , single left renal artery, 6 cm TAAA
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male, 66 Y, 9 cm symptomatic TAAA
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male, 62 Y., 5 years after Stanford B Dissektion

8.11.2011
TAAA endo – FEVAR or BEVAR?

male, 76 Y.,
12 cm symptomatic aneurysm
TAAA endo – FEVAR or BEVAR?

Open repair

EVAR

Hybrid repair

FEVAR

BEVAR

Chimney

CMD

T - BRANCH
TAAA endo – FEVAR or BEVAR?

Fenestrations

Branches
TAAA endo – FEVAR or BEVAR?
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Fenestrations:

Not forgiving!

Crucial:
Exact sizing, planning and implantation.

Meticulous patient selection

Pivot-Fenestration
Planning FEVAR

Mid-term Outcomes of Renal Branches Versus Renal Fenestrations for Thoraco-abdominal Aneurysm Repair.


<table>
<thead>
<tr>
<th></th>
<th>449 pt.</th>
<th>445 renal branches</th>
<th>411 renal fenestrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occl. Rate</td>
<td>9,6%</td>
<td>2,3%</td>
<td></td>
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</tbody>
</table>
TAAA endo – FEVAR or BEVAR?

Branches:

CMD

T-Branch
TAAA endo – FEVAR or BEVAR?

Planning CMD-BEVAR
TAAA endo - FEVAR or BEVAR?

Branches: Pro Favoring

Chance: Standardization

Münster applicability 63%

Bisdas et al. J Endovasc Ther 2013;20:672-77
TAAA endo – FEVAR or BEVAR?

Planning T-BRANCH
TAAA endo – FEVAR or BEVAR?

Branches: Pro

18 – 20 mm overlapping
TAAA endo – FEVAR or BEVAR?

Branches: Pro


The impact of early pelvic and lower limb reperfusion and attentive peri-operative management on the incidence of spinal cord ischemia during thoracoabdominal aortic aneurysm endovascular repair.


Early restoration of arterial flow to the pelvis and lower limbs, and aggressive peri-operative management significantly reduces SCI following type I-III TAAA endovascular repair. From 14 % to 1,2 %
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Branches: Con

No dedicated bridging stentgraft
<table>
<thead>
<tr>
<th></th>
<th>Fenestrations</th>
<th>Branches</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficult iliac access</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Difficult arch</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Target vessels downward facing</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>Target vessels Upward facing</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>Kiniked aorta</td>
<td>--</td>
<td>+</td>
</tr>
<tr>
<td>Narrow aortic lumen at segment 4</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>Large aortic lumen at segment 4</td>
<td>-</td>
<td>++</td>
</tr>
<tr>
<td>High risk for SCI</td>
<td>-</td>
<td>+</td>
</tr>
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8.11.2011
30.4.2012
Planung FEVAR
31.8.2012
TAAA endo – FEVAR or BEVAR?

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Summary:
Fenestrations are more suitable in a TAAA with a small lumen of segment 4 without a severe aortic kink and a good access from below.

Branches are more forgiving regarding planning and implantation, are also applicable in a kinked aorta, allow to keep the iliac occlusion time short, which could save from SCI. Enough space is needed for the branches and access through the arch.

Dedicated bridging stentgrafts are needed in the future to achieve optimal long term results for BEVAR!
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Thank you for your attention!

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