Routine LSA Revascularization Is The Way To Go When TEVAR Covers The LSA Orifice

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Financial Disclosure Slide
- Consultancy fees, Speakers bureau, Research funding
  - Medtronic
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Left Subclavian Coverage During TEVAR (40%+)
- Balance of risks – LSA bypass / branch vs. neurological sequelae of hypoperfusion left vertebral artery
- Complications from LSA revascularisation (personal series)
  - Systematic review (meta-analysis)
  - Data from MOTHER registry
- Long term consequences of neurological complication

LSA Revascularisation – Clinical Complications
- 70 cases LSA revascularisation SGVI
  - L carotid – L subclavian artery bypass (Dacron)
  - 29 staged, 41 simultaneous
  - No post-operative strokes / SCI
- 3 minor complications (haematoma / neuropraxia / seroma)

Secondary Meta-Analyses of Pooled Proportion (35 Studies)
- Stroke
- SCI

OR = 0.76 (0.49-1.78)  OR = 0.73 (0.38-1.39)

Analysis by Management of LSA - MOTHER

<table>
<thead>
<tr>
<th></th>
<th>Not Covered (n=537)</th>
<th>Covered Not revascularised (n=322)</th>
<th>Covered revascularised (n=143)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death (%)</td>
<td>31 (5.8)</td>
<td>22 (6.8)</td>
<td>10 (7)</td>
<td>0.769</td>
</tr>
<tr>
<td>Stroke (%)</td>
<td>12 (2.2)</td>
<td>29 (9)</td>
<td>7 (4.9)</td>
<td>0.000</td>
</tr>
<tr>
<td>SCI (%)</td>
<td>7 (5)</td>
<td>13 (4)</td>
<td>2 (1.4)</td>
<td>0.155</td>
</tr>
</tbody>
</table>
Effect of Management LSA – TAA and TAD - MOTHER

Effect of Management LSA – Anterior vs. Posterior Stroke

Effect of Management LSA – Anterior vs. Posterior Stroke

Number Needed to Treat

<table>
<thead>
<tr>
<th>Condition</th>
<th>NNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic carotid stenosis 70-99%</td>
<td>6</td>
</tr>
<tr>
<td>Symptomatic carotid stenosis 50-69%</td>
<td>15</td>
</tr>
<tr>
<td>Asymptomatic carotid stenosis 79-99%</td>
<td>&gt;22</td>
</tr>
<tr>
<td>LSA revascularisation TAA</td>
<td>16</td>
</tr>
</tbody>
</table>

Neurological Complications and Survival

Censored analysis 90 days

Routine LSA Revascularization Is The Way To Go

- Overall all outcomes better if LSA revascularised (20%+)
- Revascularisation of LSA reduces stroke risk (posterior)
- Effect accentuated in patients with TAA - NNT 16
- Surgical revascularisation low neurological event rate