Most Patients With Uncomplicated Acute TBAD Should Be Treated By TEVAR: Some Immediately And Some After A 6-12 Week Delay: How Can They Be Selected For Each Based On Data From The MOTHER Registry

Matt Thompson

St Georges Vascular Institute, London, UK

What Has Gone Before........
• In uncomplicated TBAD medical management safe in acute phase - 10% become complicated
• Medical management of uncomplicated TBAD has a poor long term prognosis (58% fail medical therapy)
• Medical management and surveillance does not prevent aortic related death
• TEVR seems to prevent aortic related death

What You will Hear in a Bit........
• Prophylactic surgery is what we do - “smoke and mirrors”
• Most uTBAD should undergo TEVR to prevent late aortic related death
• Difficult to predict patients that will not need TEVR
• Only remaining issue is timing of endovascular intervention
  • Very early - bad / 2-12 weeks good !!!

A Reasonable Vascular Surgeon Would Conclude........
• Early TEVR and Complications (RTAD)
  • 38 reports: 9594 patients
  • TAA: 1.1% [TAT 0%]
  • Acute dissection 8.4%
  • Chronic dissection 3%
  • OR (relative TAA): 7.8 AAD / 2.7 CAD

Financial Disclosure Slide
• Consultancy fees, Speakers bureau, Research funding
  • Medtronic
  • Endologix
Retrograde Type A Dissection – Historic??

<table>
<thead>
<tr>
<th>Trial</th>
<th>Patients</th>
<th>RTAD</th>
<th>1y RTAD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIRTUE (Thompson EJVES 2011)</td>
<td>50 acute</td>
<td>1 RTAD &lt;1y</td>
<td>2.7%</td>
</tr>
<tr>
<td></td>
<td>24 sub-acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STABLE (Lombardi JVS 2012)</td>
<td>24 acute</td>
<td>2 RTAD &lt;30d</td>
<td>7.5%</td>
</tr>
<tr>
<td></td>
<td>16 sub-acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medtronic Dissection (USA)</td>
<td>50 acute</td>
<td>1 RTAD &lt;30d</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 RTAD &lt;1y</td>
<td></td>
</tr>
</tbody>
</table>

MT 2015

Remodelling Aorta after TEVR TBAD

• Complete TL expansion, FL regression, FL thrombosis
  • Early TEVR after TBAD generates best remodelling
    • Concept of aortic plasticity
    • Time point at which plasticity lost
  • VIRTUE study: 100 patients with TBAD TEVR
  • Acute, sub acute (15-92) and chronic groups

MT 2015

Delta Maximum Aortic Diameter

Cumulative False Lumen Thrombosis

MT 2015 Virtue Trial Investigators EJVES; 48: 363

Management uTBAD

• TEVR offers protection from aortic related death
  • Risk / benefit analysis
• Therapeutic window opens when risk of RTAD reduces and closes when aortic plasticity lost
  • 2-12 weeks (at least)

MT 2015