How Often Are Additional Procedures (Open Or Endo) Required After An Open Ascending Aortic Repair Of A Type A Aortic Dissection (TAAD)

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Disclosure

- Consultant – Boston Scientific, Cook, Medtronic, WL Gore, and Trivascular

Aortic Dissection

Classification-Stanford and DeBakey

INSTEAD and INSTEAD XL

Management of Uncomplicated Type B Aortic Dissection

2-Year and 5-Year Results of the Randomized Investigation of Stent Grafts in Aortic Dissection Trial

- Characterize short-term and long-term outcomes and vessel morphology of uncomplicated TBAD patients treated with OMT vs OMT+TEVAR
- 7 European Centers
- N = 140 subjects, OMT = 68, OMT+TEVAR = 72. 2 year and 5 year follow-up
- Primary Endpoint: All-cause mortality
- Secondary Endpoints: Aorta-specific mortality and disease progression

INSTEAD XL: Key Results

TEVAR FOR AORTIC DISSECTION
PREVENTS LATE EXPANSION; ENCOURAGES AORTIC REMODELING

OMT n=68
TEVAR+OMT n=72

19.1%
12.4%

50%
40%
30%
20%
10%
0%

All-Cause Mortality p=0.13
Aorta-Specific Mortality p=0.04
Disease Progression p=0.04

Aortic Dissection (US)

- 10-15 cases/100,000 adults/year
- 10-12,000 new cases yearly
- 2/3 type A, 1/3 type B
- Acute Type B
  - 30% complicated, uncomplicated 70%
- Acute Aortic Syndrome
  - Acute AD, IMH, PAU, rTAA
Aortic Dissection
Classification-Stanford and DeBakey

Are we treating Type A dissections correctly?

Reoperation After Type A Aortic Dissection Repair: Perspectives from Thomson Reuters MarketScan® Database

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Research Objective

• Hypothesis: The current standard procedure (open repair) for the treatment of type A aortic dissection leads to too many subsequent reoperations.

• Objective: To report the incidence of reoperation following type A aortic dissection open-repair from a national claims database.

Methods: Data Source

• Patient data obtained from Thomson Reuters MarketScan Database

• Study group sample is patients (>18 yrs) who underwent repair for type A aortic dissection between 2003 and 2011

• Follow-up time for study group is 1 and 2 years
MarketScan Inpatient Variables

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Description</th>
<th>Data Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Date (ADMDATE)</td>
<td>Date of hospital admission</td>
<td>I, S</td>
</tr>
<tr>
<td>Admission Type (ADMTYP)</td>
<td>Type of hospital admission</td>
<td>I, S</td>
</tr>
<tr>
<td>Length of Stay (DAYS)</td>
<td>Length of Stay</td>
<td>I</td>
</tr>
<tr>
<td>DRG (DRG)</td>
<td>Diagnosis Related Group (I, S)</td>
<td>Discharge to home, hospital, long-term care facility, died</td>
</tr>
<tr>
<td>Diagnosis (PDX, DX1-DX15)</td>
<td>ICD-9 Diagnosis Codes</td>
<td>I, S</td>
</tr>
<tr>
<td>Procedure (PPROC, PROC1-PROC15)</td>
<td>CPT or ICD-9 Procedure Codes</td>
<td>I, S</td>
</tr>
</tbody>
</table>

Codes Collected from MarketScan to Identify TAAD Patients

<table>
<thead>
<tr>
<th>Type of Code</th>
<th>Code Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>ICD-9-CM Diagnosis</td>
<td>Thoracic Aortic Dissection</td>
<td>441.01</td>
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<tr>
<td>ICD-9-CM Diagnosis</td>
<td>Thoracoabdominal Aortic Dissection</td>
<td>441.03</td>
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<tr>
<td>ICD-9-CM Procedure</td>
<td>Resection of Vessel w/ Anastomosis, Aorta</td>
<td>38.34</td>
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<tr>
<td>ICD-9-CM Procedure</td>
<td>Resection of Vessel w/ Anastomosis, Other Thoracic Vessels</td>
<td>38.35</td>
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<tr>
<td>ICD-9-CM Procedure</td>
<td>Resection of Vessel w/ Replacement, Other Thoracic Vessels</td>
<td>38.45</td>
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<td>ICD-9-CM Procedure</td>
<td>Cardioplegia</td>
<td>39.36</td>
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<td>ICD-9-CM Procedure</td>
<td>Valve repair</td>
<td>35.00 - 35.99</td>
</tr>
<tr>
<td>ICD-9-CM Procedure</td>
<td>Operations on vessels of the heart</td>
<td>36.00-36.99, 37.0, 37.2, 37.3-37.90, 37.93-37.99</td>
</tr>
</tbody>
</table>


Aortic Dissection Study Sample Flowchart

Aortic Dissection Reoperation Study Sample Flowchart

Aortic Dissection Reoperation Study Sample Flowchart
Conclusions

• Our current Type A treatment is inadequate
• Current technology is still evolving to treat the whole aorta
• Frozen elephant trunk techniques can stabilize the aorta until additional technology exists