The compliance with “best” medical therapy in type B aortic dissection patients is poor – we need to optimize medical treatments to improve long-term outcomes.

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Disclosure

Speaker name: Colin Bicknell

I have the following potential conflicts of interest to report:

- [x] Consulting – Medtronic, Bolton Medical, Orzone
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [x] Other(s) – Speaker, travel and conference fees from Medtronic and Bolton and Gore;
- Imperial College London:
  - [x] Institutional level funding from Orzone
BEST MEDICAL THERAPY IN TBAD

OMT + TEVAR  OMT

Cumulative probability of progression

HR=0.55 (0.32 - 0.98)
p=0.041

OMT + TEVAR  OMT

Cumulative probability of death

HR=0.52 (0.22 - 1.24)
p=0.140

Survival

Time (Years)

Nienaber Circ 2013;6:407-416
Durham. JVS 2015;61(5):1192-1199

Imperial College
London
Aggressive anti-impulse therapy is the cornerstone of management in the majority of patients with TBAD who are currently managed conservatively.

Guidelines recommend goal-directed therapy to achieve a heart rate of less than 60bpm and systolic pressure of 100-120mmHg; goals which may require a number of pharmacological agents to achieve.

Higher systolic blood pressure readings at night have prognostic significance, and are associated with an increased risk of aortic events during follow-up in those with TBAD.


HYPERTENSIVE POPULATION

• General hypertensive population
  – 37% patients have controlled BP
  – 50% patients non-adherent in 1\textsuperscript{st} Yr of treatment
  – Higher levels of adherence result in better BP control and reduced cardiovascular morbidity

• Rate of medication adherence unknown in TBAD

• If poor, does this provide a valid basis for comparison of treatment strategies?

Tomaszewksi. Heart 2014;1:855-861
CROSS SECTIONAL ANALYSIS OF TBAD PATIENTS

• Mixed methods study in tertiary centre for complex aortic disease

- Demographics
- Psychological and behavioural predictors of adherence
  Health Belief Model
- Patient disease specific knowledge

Validated Measure of Medication Adherence
Morisky Medication Adherence Scale 8

<table>
<thead>
<tr>
<th>DEMOGRAPHICS</th>
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### N = 47

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<tr>
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<tbody>
<tr>
<td><strong>Mean age</strong></td>
<td>59 (31-100)</td>
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<tr>
<td><strong>Male sex</strong></td>
<td>38 (80.9%)</td>
</tr>
<tr>
<td><strong>CKD (eGFR &lt;60ml/min/1.73m²)</strong></td>
<td>9 (19.1%)</td>
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<tr>
<td><strong>Dyslipidaemia</strong></td>
<td>29 (61.7%)</td>
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<tr>
<td><strong>IHD</strong></td>
<td>15 (31.9%)</td>
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<td><strong>Connective tissue disorder</strong></td>
<td>6 (12.8%)</td>
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<tr>
<td><strong>Previous aortic surgery</strong></td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td>10 (21.2%)</td>
</tr>
<tr>
<td>Endovascular</td>
<td>12 (25.5%)</td>
</tr>
<tr>
<td>Hybrid</td>
<td>3 (6.4%)</td>
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<tr>
<td><strong>Number of medications (mean)</strong></td>
<td></td>
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<tr>
<td>All</td>
<td>5.8 (2-14)</td>
</tr>
<tr>
<td>Anti-HTN</td>
<td>1.9 (1-6)</td>
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<tr>
<td><strong>Symptomatic at TBAD diagnosis</strong></td>
<td>34 (72.3%)</td>
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Overall medication adherence was poor

- Mean MMAS-8 = 6.51/8
Psychological Behaviors have a strong bearing on adherence

- Demographics psychological and behavioural predictors of adherence
  - Previous aortic surgery (β 0.332, p=0.03)
  - Greater number of medications (β 0.332, p=0.026)
  - Fewer medication side effects (β=0.272, p=<0.014)
  - Better memory (β=0.579, p=<0.001)
  - Higher perceived benefit (β= 0.486, p=<0.001)

- Overall patients had a poor knowledge about TBAD
  - Test score = 8.8/16 (94-14)
Key Messages

• Medication adherence is poor in TBAD patients
  – >50% of patients report sub-optimal adherence
  – Adherence especially poor in non-operative group

• Low levels of adherence may play a part in the high levels of aortic morbidity and mortality in this cohort

• Brings into question whether there has been a robust comparison of treatment strategies for TBAD when half of one treatment group do not receive the intervention?
RECOMMENDATIONS

• SPECIALIST DISSECTION CLINICS
  – Measurement of compliance
  – anchoring positive health behaviors to salient events improves compliance with treatment
  – ‘coaching and oversight’ of treatment strategies

• SHARED MEDICAL APPOINTMENTS
  – Increase knowledge of disease
  – Support and counseling

• BEHAVIOURAL PSYCHOLOGY STRATEGIES
  – Text messaging and compliance
  – Habit formation

• A RECOGNITION WHEN CONSIDERING THE TREATMENT OF UNCOMPLICATED TBAD