

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:

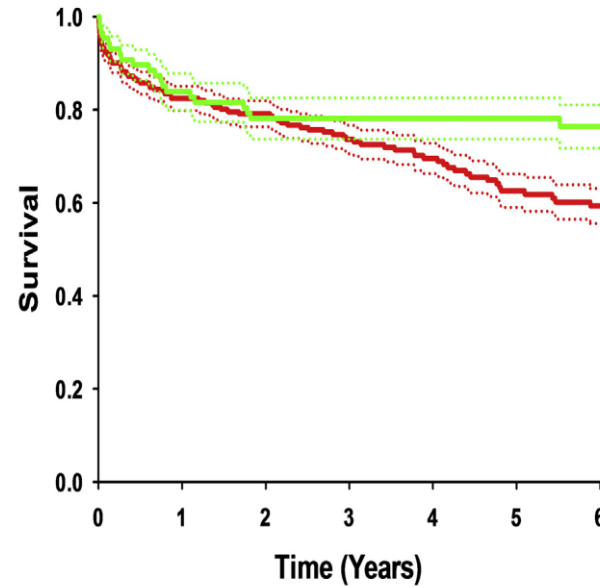
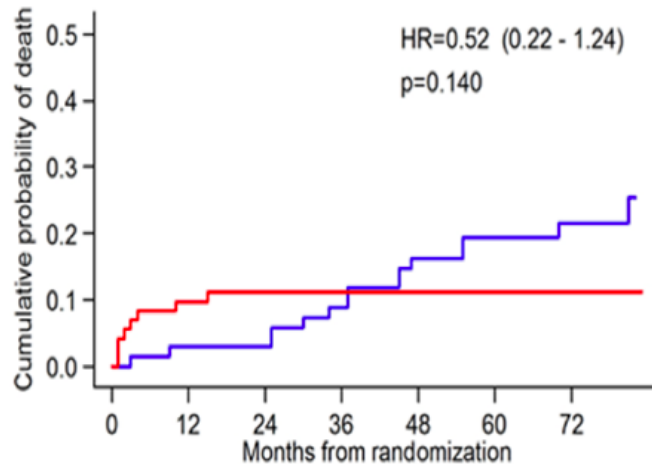
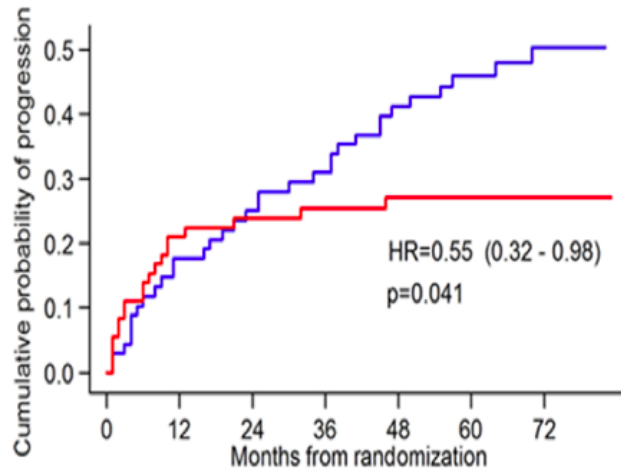
- Consulting – Medtronic, Bolton Medical, Orzone
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s) – Speaker, travel and conference fees from Medtronic and Bolton and Gore;

Imperial College London:

- Institutional level funding from Orzone

BEST MEDICAL THERAPY IN TBAD

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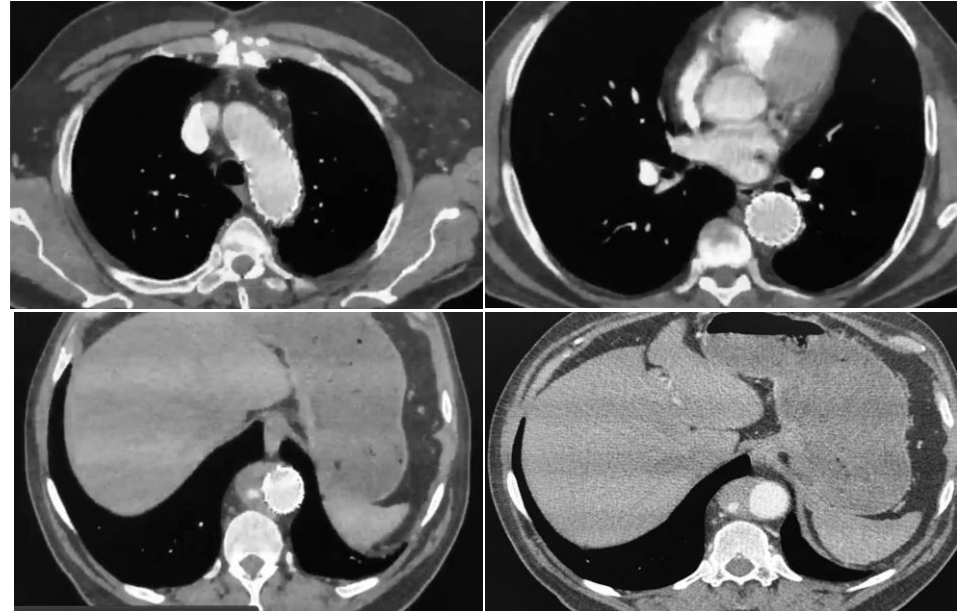
Nienaber Circ 2013;6:407-416
Durham. JVS 2015;61(5):1192-1199

Guidelines for Best Medical Therapy

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



Hiratzka L, Bakris G, Beckman J, ... Williams D. 2010 ACCF/AHA/AATS/ACR/ASA/SCA/SCAI/SIR/STS/SVM guidelines for the diagnosis and management of patients with Thoracic Aortic Disease: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines, A. *Circulation*. 2010;121(13):e266-369.

Scott A, Bicknell C. Contemporary management of acute type B dissection. *Eur J Vasc Endovasc Surg*. 2016;51(3):452-459. doi:10.1016/j.ejvs.2015.10.026.

Delsart P, Ledieu G, Ramdane N, ... Haulon S. Impact of the management of Type B aortic dissection on the long-term blood pressure. *Am J Cardiol*. 2017;33(0):0-4. doi:10.1016/j.amjcard.2017.04.052.

HYPERTENSIVE POPULATION

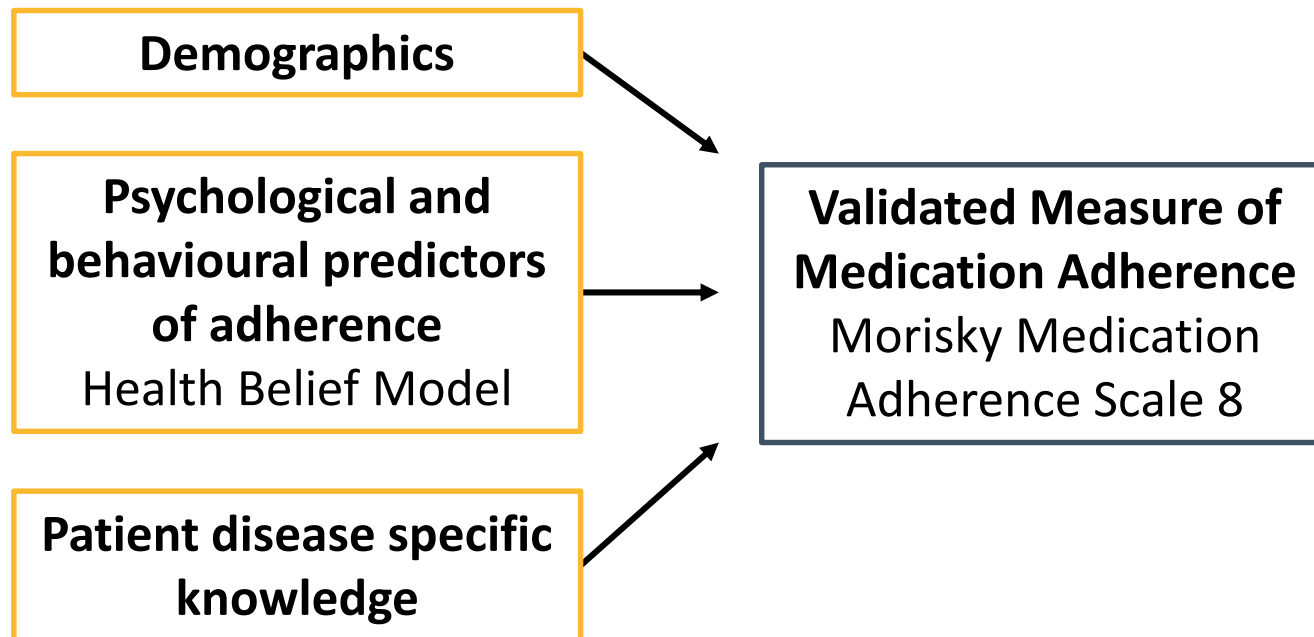
- General hypertensive population
 - 37% patients have controlled BP
 - 50% patients non-adherent in 1st Yr of treatment
 - Higher levels of adherence result in better BP control and reduced cardiovascular morbidity
- Rate of medication adherence unknown in TBAD
- If poor, does this provide a valid basis for comparison of treatment strategies?



Falaschetti. Lancet 2014;383(9932):1912-1919
Tomaszewski. Heart 2014;1:855-861
Mazzaglia. Circulation 2009;120(16):1598-1605

CROSS SECTIONAL ANALYSIS OF TBAD PATIENTS

- Mixed methods study in tertiary centre for complex aortic disease



Morisky. J Clin Hyperten 2008;10(5):348-354
Prochaska. Am J Heal Promot 1997;12(1):38-48

DEMOGRAPHICS

N = 47		
	Mean age	59 (31-100)
	Male sex	38 (80.9%)
	CKD (eGFR <60ml/min/1.73m ²)	9 (19.1%)
	Dyslipidaemia	29 (61.7%)
	IHD	15 (31.9%)
	Connective tissue disorder	6 (12.8%)
Previous aortic surgery	Open	10 (21.2%)
	Endovascular	12 (25.5%)
	Hybrid	3 (6.4%)
Number of medications (mean)	All	5.8 (2-14)
	Anti-HTN	1.9 (1-6)
	Symptomatic at TBAD diagnosis	34 (72.3%)

RESULTS



High Adherence
20/47 (42.5%)

Medium Adherence
17/47 (36.2%)

Low Adherence
10/47 (21.3%)

- Overall medication adherence was poor
 - Mean MMAS-8 = 6.51/8

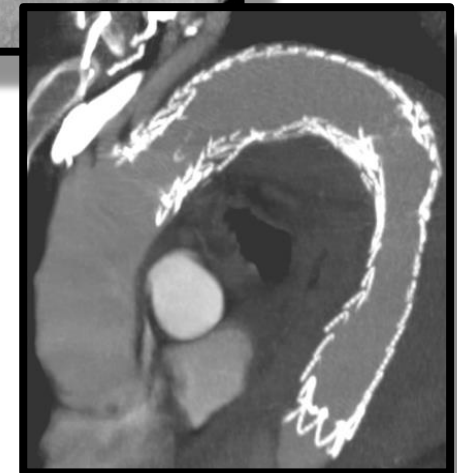
Psychological Behaviors have a strong bearing on adherence

- 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 ($\beta=0.272$, $p<0.014$)
 - Better memory ($\beta=0.579$, $p<0.001$)
 - Higher perceived benefit ($\beta= 0.486$, $p<0.001$)
- Overall patients had a poor knowledge about TBAD
 - Test score = 8.8/16 (94-14)

Stepwise multiple linear regression analysis to assess demographic, psychological and behavioural predictors of adherence

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

