Best Medical Therapy For Acute TBAD Patients:
What Is It And Strategies To Optimize It: How Effective Can It Be

Colin D Bicknell
Division of Surgery, Department of Surgery & Cancer, Imperial College London, UK
Imperial Vascular Unit, St Mary's Hospital, London, UK

Imperial College London

Best Medical Therapy in TBAD

• Patients receiving “best” medical therapy in chronic TBAD fare badly compared to those undergoing TEVAR
• Leading to suggestions that TEVAR for uncomplicated dissection should be considered in all patients

Evidence for Best Medical Therapy

• Beta blocker therapy appears to reduce outcomes from aortic related events
  • 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

Evidence for Best Medical Therapy

Systematic Review of Growth Rate Reduction

• Decreasing event rate
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 60 bpm and systolic pressure of 100-120 mmHg; goals which may require a number of pharmacological agents to achieve.

Beta blockers generally recommended alongside further regimes to control BP.

HYPERTENSIVE POPULATION

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

HYPERTENSIVE POPULATION

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

CROSS SECTIONAL ANALYSIS OF TBAD PATIENTS

• Mixed methods study in tertiary centre for complex aortic disease
  - Demographics
  - Patient disease specific knowledge
  - Psychological and behavioral predictors of adherence
  - Health Belief Model

Validated Measure of Medication Adherence
  - Morisky Medication Adherence Scale

• Overall medication adherence was poor
  - Mean MMAS-8 = 6.51/8
  - Definite psychological and behavioral predictors of adherence
  - Knowledge of consequences of TBAD poor

ADMINISTRATIVE DATA SET UK ANALYSIS

• 70% have SBP>140mmHg on at least one occasion
• Only 17.7% consistently below 120mmHg Systolic
• 95% are on antihypertensives with systolic >140mmHg
• Compliance is poor
• Currently analyzing drug class and compliance effects on longer term survival/aortic complication

MESSAGES

• WHAT IS IT?
  – There is weak evidence at best for optimum medical therapy
  – But control of blood pressure appears vital

• STRATEGIES TO OPTIMISE IT:
  – SPECIALIST DISSECTION CLINICS
  – Measurement of compliance
  – Anxious positive health behavior to salient events
  – Coaching and oversight of treatment strategies

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

• BEHAVIORAL PSYCHOLOGY STRATEGIES
  – Text messaging and compliance strategies/mHealth/Wearable technology
  – Habit formation

• HOW EFFECTIVE CAN IT BE?
  – Truth is we don't know, because we aren't doing it
  – WE MUST INCLUDE AGGRESSIVE MEDICAL THERAPY ARM IN PROSPECTIVE TRIALS

IMPERIAL SPECIALIST DISSECTION CLINIC

• Running over ten years, Lead vascular surgeon Rick Gibbs
  - Health assessment
  - Clinic BP, 24 Hour BP assessment and Mx
  - Monitoring of dissection, MRI/CT
  - Assessment and treatment leads to significant increase in antihypertensive medication adjustment
  - Increased patient knowledge of treatment strategies
  - Attention to compliance
  - Focus for research

• Mixed methods study in tertiary centre for complex aortic disease
  - Demographics
  - Patient disease specific knowledge
  - Psychological and behavioral predictors of adherence
  - Health Belief Model

Validated Measure of Medication Adherence
  - Morisky Medication Adherence Scale

• Overall medication adherence was poor
  - Mean MMAS-8 = 6.51/8
  - Definite psychological and behavioral predictors of adherence
  - Knowledge of consequences of TBAD poor