How To Manage Re-Entry Sites In The Arch And Visceral Segment Of The Aorta After TEVAR For TBADs

Tim Resch
Nuno Dias, Björn Sonesson
Vascular Center
Skane University Hospital
Sweden

Disclosure
- I have the following potential conflicts of interest to report:
  - COOK Medical - Consulting, IP, SAB
  - Medtronic – SAB
  - Gore – Speaker, CEC
  - Kardiozis – SAB
  - Bentley - SAB

Morphological aortic changes are common after TEVAR
- Proximal dilatation
- Distal perfusion and dilatation
- SINE

Morphological changes are correlated to initial dissection extent (3a vs 3b) as well as stentgraft coverage both proximal and distal

Manning et al JEVT 2009

Predictors of FL expansion after TEVAR
- > 5 distal tears
- Visceral perfusion (DeBakey 3b)
- Abdominal extension
- Large Aorta (>37mm) acutely
- Short TEVAR coverage
- Continued FL perfusion

Fate of False Lumen flow
- Distal FL flow persists in 65-80% of patients**
  - Significantly more common in chronic and type 3b extent dissection*
- Significant Dilatation of Distal Arch

*Rodriguez et al JV5 June 2008
**Perhoyle et al JCVS 2008
**Santo et al ATS 2008

Predictors of Outcome after Endovascular Repair for Chronic Type B Dissection

- N=58
- Chronic type B
- 3 year mortality 36%

No remodelling → Death
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- TEVAR + False Lumen Occlusion
- Fenestrated/Branch Repair
  - Open Repair
  - Hybrid Repair

**FL OCCLUSION**

**Aortic Epic Lumen Thrombosis Induction by Embolotherapy AFTER: Following Endovascular Repair of Aortic Dissection**

- 31 Petticoat for AD
- FL expansion >10mm in 10pts
- FL embolisation w coils and glue
- 100% technical success

Hoffenberth JVT 2012

**False lumen intervention to promote remodelling and thrombosis—The FLIRT concept in aortic dissection**

- Xuan Yuan, MD, BS, MD^2, 3, 4, 5
- Andreas Milar, MD
- Thomas Semlyen, FRCS, MBBS, BS, MD^1
- Mienen Castro Verdouw, MD^1
- Edition Cardimamburo Cendan, MD, MB, BS^1
- Yita Tang, MB, PhD^1
- Christoph A. Hanrath, MD, PhD^1
- Cath Cardiology Review 2018:52:732
- Chronic DeBakey 3b dissection
- Open Arch Repair + ET
- Aneurysm expansion Descending Aorta
FENSTRATED/BRANCH REPAIR

• N=71
• Technical Success 96%
• 30d Mortality 5.6%
• SCI 4.2%
• Reintervention 50% @ 3 years
  – Branch vessel and iliac endoleaks mainly
• 85% sac thrombosis @ 12 months

16 TAAA, 7 Arch
  – Technical success 71% Arch, 100% TAAA
  – Procedure time mean 4 hours
  – Median FU 12 months
  – 4 reinterventions (2 EL, 2 Access vessel)
  – 100% TVP
Outcomes

- **EARLY**
  - In Hospital mortality and stroke 4%
  - Technical Success 94%
  - 12 patients early intervention
    - 8 access
    - 2 pericardical drainage
    - 2 endoleak

- **LATE**
  - 29% secondary intervention
    - 9 EL
    - 1 OR for prostetic kink
    - 10 distal SG extensions
  - 1 aneurysm related death during FU

Stand alone TEVAR has high failure rate

- Endovascular Options for Residual Dissection
  - FL occlusion
    - Do no further harm
  - Fenestrated/Branch Repair
- Limited data available

- 14 centers, Retrospective 2011-2018
- COOK A Branch
- N=71
- Previous Open ascending repair
- Median FU 301days
Ninja Tip #1

If you don't have time to get it right the first time.

You certainly won't have time to go back and fix it.

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