Aortic Occlusion
Aortic Occlusion
Aortic Coarctation
Aortic Coarctation
Potential opportunities for endoluminal treatment of thoracic aortic pathologies

Atherosclerotic Aneurysm

Acute Dissecting Aneurysm with Vascular Compromise

Chronic Dissection with Expansion

Aortic Ulcer with Embolization

Adult Coarctation

Pseudo Aneurysm Associated with Previous Repair

Acute Transection Secondary to Trauma
Diameter: Oversize 20% (2-4mm over)
Hybrid OR
Components of Thoracic Endografting

Pre-operative

History and Physical
- pulses

Imaging
- CXR
- Helical CT scan (3mm slices minimum)
- Angiogram

Pre-operative planning
- CT scan analysis
- Vascular access issues
- Proximal and Distal landing zones
- Device selection
- Spinal drain
Proximal fixation site length > 30 mm

Aortic radius > 35 mm

Distal fixation site diameter 24-36 mm

Distal fixation site length > 30 mm

Proximal fixation site diameter 24-36 mm
Components of Thoracic Endografting

**Operative**
- Spinal drain (if necessary)
- Imaging equipment
- Patient Positioning
- Imaging
  - Angiogram
  - Intravascular Ultrasound
- Vascular Access
  - Femoral
  - Retroperitoneal conduit
- Sheath Delivery
Components of Thoracic Endografting

Operative (continued)

- "Roadmapping"
- Device delivery
- Device deployment
- Ballooning
- Endoleaks
- Sheath removal
- Repair of vascular access
Access for Thoracic Aortic Procedures is a Major Consideration

- Retroperitoneal conduits
- Management of delivery complications
- Brachial-femoral wires, etc
Components of Thoracic Endografting

**Post-Operative**
- BP issues
- Spinal cord protection
- Graft Surveillance
GORE TAG Thoracic Endoprosthesis

Caution: Investigational device. Limited by United States law to investigational use only.
MEDTRONIC
Valiant Thoracic Stent Graft System

Valiant stent graft

Talent stent graft
Modular Design

Two-piece modular system allows the physician to customize a graft system to fit each patient’s individual anatomy.
Bolton Medical Relay® Thoracic Stent-Graft

Designed for the Arch
Stent Deployment Considerations

- Flexibility of stent
- Length of the stent
- Radial strength
- Expansion characteristics
Consequences of Intimal Tear Closure

1) Reduces false lumen
2) Facilitates thrombosis
3) Improves visceral circulation
A Renaissance in Aortic Dissections
Long-term Follow-up

Pre 1yr 2 yrs 3 yrs 4yrs 5yrs

Rod White, M.D.
Summary

Endovascular Recoloution Has Begun

Cardiac Surgeons Need to Develop Endovascular Skills

Team Work and Partnership

International Collaboration
Overview of Endovascular Aortic Therapies

NCVH2016 Fellows Course
May 31st, 2016

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