FENESTRATED-BRANCHED eTAAA REPAIR FOR CHRONIC DISSECTIONS

Edited videos from the Mayo Clinic

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FACULTY DISCLOSURE

Gustavo S. Oderich MD
• Consulting, DSMB, CEC*
  Cook Medical Inc., WL Gore, Lombardi
• Honoraria
  WL Gore, Endologix
• Research grants*
  Cook Medical Inc., WL Gore, Atrium Maquet

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OUR APPROACH TO TAAAs

• Tailored to age, clinical risk, genetics and anatomy
• Prospective physician-sponsored IDE study
  - Aneurysms and chronic dissections
  - Expected survival > 2 years
  - Suitable proximal/distal landing zones
  - Adequate target vessels (>13mm length, 4-11 mm diameter)
  - Adequate ilio-femoral access
• ‘Relative’ contra-indications
  - Genetically triggered aortic disease
  - Mycotic aneurysms
  - Ruptures with hemodynamic instability
  - ‘Shaggy’ aorta, excessive tortuosity, etc…

Device Design

DEVICE DESIGN

Patient-Specific

t-Branch®

Branch Incorporation

Fenestrations
- Small (6x6mm) - Large (8x8mm)
- Narrow lumen (<35mm)
- Up-going arteries

Branches
- Internal Helical
  Down
  Up
- Down-going arteries

SCI PREVENTION

Mayo Clinic Advanced Aortic Protocol

- Permissive hypertension
- Routine CSF drainage
- Transfusion requirements
- Subclavian/ hypogastric preservation
- Staged type I-II TAAA repair
- Neuromonitoring
- Early limb reperfusion (iliofemoral conduits)

ClinicalTrials.gov NCT1937949 and NCT02989607
Proximal coverage
Incomplete repair
Perfusion branches
Motor evoked potentials
Somatosensory evoked potentials
75% ABNORMAL WAVEFORM
Intraoperative maneuvers:
CSF 0-5 cm H2O
MAP >90-100 mm Hg
No change or deterioration
Restore pelvic & lower extremity flow
Leave branch unstented
Complete the repair

No changes in neuromonitoring
Improvement
No change or deterioration
Leaves branch unstented

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CASE PRESENTATION

- 69 year-old women
- TBAD in 2000
- Severe COPD, continued smoking
  - DLCO 35%, FEV1 33%
  - Short of breath with ambulation and stairs
- No CAD, stroke, DM
- Cr 0.9 mg/dL

- Retrograde right renal branch
- Short bifurcated device with inverted iliac limb