The Ascending Aorta

Sealed in ascending aorta (for Multi[Branches ARCH EVAR])
- Ascending Aorta Length: 240mm
- Ascending Aorta Diameter: 138mm

High shear stress in enlarged Aorta

The wrapping TECH

1) Prolen mesh
2) SA rerouting (as partial)
   - Generally BCT and LCCA

mBEVAR feasibility: 7% of all TAR

Most common exclusion for endovascular repair is excessively large ascending aortic diameter!
Sizing Branch(es) and ASG in PG-Technique

Potential issues:
- Aortic graft too small
- PG too large

PG size matters for GEL!

Branch-related aortic flow restriction

Aortic flow restriction with multibranches

Technique to reduce diam of PG and/or aortic SG

Target branch size 12mm
First step: Bilateral carotid to axillary bypass

Rapidly growing descending aneurysm
- Dissected enlarged BCT
- Narrowed TL

Percutaneous Arch PG-EVAR (Chimneys)

Access to
- Axillary right side
- LCCA and RCCA
- AFC bilateral

T&T AxFem GW
- Landing TAG 31mm in TL

T&T GW looping technique

Facilitates SG introduction:
- Pulling up SG into the arch
- Pushing/pulling on GW ends allow fine tuning of the SG position
- Guide wire end never free to perforate LV

Once SG is in ideal position, Chimney can be introduced over axillary end of the GW

Occlusion of BCT FL with mVSD occluder
(eLASTomer membrane)

45mm TAG
7/9mm VB in CCA
Parallel Grafts ARCH@USZ

| 44% acute patients (48) | 14% redo thoracic aorta (43) |

Mid to Long-term results @ USZ

- From October 2009 to May 2014
- 41 patients (13 female: 31%)
- mean age 68 years (27-87; SD 13)

Mean FUP 42 months (SD 28; 0-109)

Reinterventions during FUP
42 months (SD 28; 0-109)

11/41 (27%)
Most reintervention during first year

- Endoleaks
  - 2x coil embolization (Ia/Ib)
  - 2x CPG extension
  - 2x distal TEVAR relining/extension

- Branches
  - 1x stenting LSA PG
  - 1x correction of PG inflow

- Others
  - 1x TAVI (pre-defined strategy), 2x HR (ascending repl. + SA rerouting + TEVAR zone 0)

Aneurysm behavior during FUP

Maximal Transverse Aneurysm Diameter
- Preoperative 61.38 (26-100; SD:17) mm
- Postoperative 55.84 (26-94.00; SD:16) mm
  - 9.02% reduction P<.001

Mean Aneurysm Volume
- Preoperative 416 (SD 531, 43-2670) ml
- Postoperative 324 (SD 381, 26-2026) ml
  - 22% reduction P .042

Conclusions

Good results with ARCH PG Technique achieved
- Selected patients
Best case

- Landing in ascending graft (post repair), or
- Native aorta length >4cm and diameter ≤38mm
- One Chimney configuration
  - Ev. Combined with Periscopes or debranching/rerouting

Conclusions

Good results with ARCH PG Technique achieved

- Selected patients

Behave durable up to 3 years mean follow-up
  - Taking into account substantial number of reinterventions to maintain seal and/or branch patency