How to handle Specific Anatomical Issues in PDTAAA

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Lay-out

• Technical Challenges/Tips/Limitations
  – Some examples

• „Thinking out of the box“
  – Special Case
Post-Dissection TAAA
Specific Anatomical Points of Attention

• Basic Rules apply:
  – Access (usually not a problem)
  – Need for proximal and distal landing zone
  – Suitable visceral artery target vessels

• Special Anatomical Features
  – Small True Lumen
  – Target Vessels originating from True/False lumen
  – Lack of Distal Landing Zone
Case Example #1
Access in PDTAAA Patient

• 79 YO Male
• Post-Dissection Aneurysm
  – Arch + Thoracic Aorta
• 2006: Asc. Conduit + Valve
• 2018: Iliac Stent right
  – Occluded

• Co-Morbidity
  – Renal Insufficiency (Cr:1.9mg/dl)
  – Claudication/Femoral Pulses present
Upper Access
Catching Wire in TL
Test Run with Sheath
Arch Branch Device
Case Example #2
PDTAAA with RRA originating from FL

• 80 YO Male

• Post-Dissection TAAA
  – Dmax 5.9cm
  – TEVAR 4 months after acute dissection
Point of Attention

- RRA from False Lumen
  - No entry tear...
Procedure

• RRA not contrasted
  – Originates from False Lumen...
  – No Entry Tear
• Dissection Flap Perforation
  – Back of a wire
Case Example #3: Type I EL (left renal artery)

Completion angio

Angio one month after CT
Case Example #4: Distal landing in dissected CIA
Distal landing in dissected CIA
Complete sealing during F/U:

Intraoperative Endoleak
Complete sealing @ 12 months
Persisting endoleak @ 9 months

Intraoperative Endoleak

Distal landing in dissected CIA

Incomplete sealing during F/U:

Persisting endoleak @ 9 months
Reintervention: Bilateral IBD
Case Example #5

• 62 YO female Pt
• Postdissection TAAA
  - Dmax: 61 mm
• Type B Dissection 2002
  – Fem-fem crossover Bypass 2002
  – TEVAR 2006 (Endofit)
  – Progression TAAA: 50 -> 61 mm

• Comorbidity
  - COPD
Graft Specifics

- **Preloaded System**
  - (one femoral access only)
- **2 preloaded wires**
  - RRA and CT
  - LRA and SMA
- **Strategy**
  - 2 TV from axillary approach
  - 2 TV from femoral approach
Anatomy Sketch
Distal Strategy

- Landing in native aorta above lumbar arteries
- Staged approach? If needed extension into R CIA at later Stage
- Amplatzer Plug occlusion of L CIA
Catheterization of target vessels

LRA catheterization not possible
Stenting of CT, SMA and RRA
(completion angio‘s)
Completion DSA

Endoleak from non-stented LRA
Post-operative Course

• Creatinine: 1.0 -> 1.7 mg/dL

• Duplex:
  • Diminished perfusion RRA (stented)
  • Good perfusion LRA (non stented)

CT-Angio
RRA

Collapsed Stent-graft

RRA Stent compression

Distal
Reintervention
Re-catheterization of CT, SMA and RRA Stent
STABILIZE-like Technique
Re-PTA of CT, SMA and RRA
Catheterization LRA Fenestration Perforation and PTA Dissection Flap
Catheterization LRA

Not possible to advance sheath
Plan: Scissering Dissection Flap

Sheath/Catheter in false lumen

Snaring guidewire
Scissoring Dissection Flap + Fustar 10F
LRA Catheterization + Stenting
Completion Angio LRA
Postoperative Course

• Good Recovery
• Normalisation of Renal Function
• Discharge to Rehab
Conclusions

• Access: usually not a problem
• Small lumen: usually not a problem

• TV from FL: sometimes need for perforation of dissection flap
• TV in dissection: seal deeper into the TV

• Distal landing zone: stage where needed