Redo Procedures After TEVAR: Why Needed; Tips, Tricks And Results

Germano Melissano
Vascular Surgery, “Vita-Salute” University
Scientific Institute San Raffaele - Milan, Italy
Chairman: Prof. R. Chiesa

Why?
1. Endoleak
2. Migration
3. Stent-graft failure
4. Infection
5. Aorto-esophageal (bronchial) fistula
6. Retrograde dissection

1. Proximal endoleak: cuff

1. Proximal endoleak: cuff + debranching

1. Distal endoleak: cuff

1. Proximal endoleak: cuff

Type 1a endoleak
Proximal cuff

Type 1b endoleak
Distal cuff

Disclosures
- PI/Co-PI for several thoracic and abdominal aortic stent graft trials (Cook, Inc, Cordis Corporation, Bolton Medical)

- Proctor and lecturer at symposia hosted by Cook, Inc., Bolton, W.L. Gore and Associates, Jotec and Medtronic, Inc.
1. Distal endoleak: open conversion #1

- Endoleak (1B)

1. Visceral perfusion

- Previous AAA graft
- Previous DTA stent-graft

1. Distal endoleak: open conversion #2

- Type 1b endoleak
- Aorto-bifem bypass + Right iliac-iliac renal bypass

1. Distal endoleak: open conversion

- SG partial resection
- Triple layer:
  - Endograft
  - Aorta
  - Teflon felt

1. Distal endoleak: 1 month CT scan

- Left "sutureless" aorto-renal bypass
- Previous right ilio-renal bypass

2. Migration, bird's beak

- Jotec XL bird-beak correction
3. Graft failure and infection

- Previous F-EVAR for type IV TAAA
- Progressive sac enlargement

3. Visceral perfusion

Custodiol 4°C
Ringer 4°C

4. Infection

- Previous TEVAR
- 4 months later: pleural empyema, endograft infection

4. Open conversion

Thoracic fluid collection
Exposed endograft

Endograft removal
4. Reconstruction

"In situ" with silver-triclocsan coated graft

4. Follow-up

2-year control PET-CT: No abnormal captation

5. Aorto-esophageal fistula

- TEVAR for DTA
- Fever
- CT - PET +

5. Stent-graft removal

5. Esophageal repair

5. In-situ repair + Intercostal muscle flap
6. Retrograde dissection

Zone 0 TEVAR for DTA

Late (3 months) retrograde dissection with syncope and acute chest pain

6. Open conversion

Ascending aortic repair and “Y” graft reimplantation

6. Postoperative CT scan

OSR experience (1993-2015)

TEVAR = 567 patients

Reinterventions after TEVAR

58

From: our series = 27 (4.8%) other Institutions = 31

Indication to reintervention (N = 58 pts) | Mortality
--- | ---
Endoleak (25) | 1 (4%)
Endograft migration+failure (18) | 1 (5%)
Retrograde dissection (6) | 2 (33%)
Infection/fistulization (9) | 3 (33%)

Conclusions

The incidence of TEVAR failure requiring Open Surgical correction is not negligible
Conclusions

The surgical skills required to address this issue should not be lost.