How Can Aorto-Esophageal Fistulas After TEVAR Or An Open Thoracic Prosthetic Graft Be Treated Effectively And Give The Patient A Chance At Survival

Geert Willem Schurink
Barend Mees
Noud Peppelenbosch
Michael Jacobs

Maastricht University Medical Center, the Netherlands
European Vascular Center Aachen-Maastricht, Germany and the Netherlands

Disclosures:
• None related to the subject

Mechanism of post-TEVAR AEF
• Pressure necrosis / direct erosion / radial force TEVAR
• Necrosis due to occlusion of the aortic side branches that feed the esophagus
• Infection of TEVAR

• 17 centers
• 2387 TEVAR / 36 AEF
• Incidence of AEF after TEVAR: 1.5%
Treatment of post-thoracic endovascular aortic repair aorto-esophageal fistula—only radical surgery can be effective: techniques and sequence of treatment

Drusu Krotlic, Alexander Gansbret, Michael J. Javou

| Author | Management | Number | Survival (%) | Follow-up
|--------|------------|--------|--------------|-------------
| Denny et al, 2014 | Stent grafting + aortic replacement | 13 | 92 | 12
| | Endo-stapling | 3 | 30 | |
| | Endovascular stenting | 6 | 9 | |
| Loutre et al, 2009 | Stent grafting + aortic replacement | 2 | 71 | 12
| | Endo-stapling | 2 | 30 | |
| | Endovascular stenting | 2 | 9 | |
| клиническое пробное | Stent grafting + aortic replacement | 3 | 9 | 12
| | Endo-stapling | 3 | 30 | 12
| | Endovascular stenting | 1 | 9 | |

Principle treatment strategy of post-TEVAR AEF

- Primary resection of the esophagus
- Debridement of the contaminated tissues followed by abundant lavage of the mediastinum
- In situ reconstruction of the aorta with
  - Dacron prosthesis (rifampicine / Silver)
  - Homograft
  - Tube created from bovine pericardial patch

Surgical Approach

For most of the descending thoracic aorta:
- Left anterior/lateral thoracotomy

If ascending and aortic arch are involved:
- Bilateral anterior (“clam-shell”) thoracotomy

Conclusions

- (Post TEVAR) aorto-esophageal fistula is lethal
- Drain, rinse, pray and hope is no option
- Surgical strategy:
  - Stop the bleeding (TEVAR)
  - Resection of Esophagus
  - Debridement of the contaminated tissues followed by abundant lavage of the mediastinum
  - In situ reconstruction of the aorta
- Radical approach is the only durable solution