Treatment of Innominate Artery Pseudoaneurysm with a Modified Covered Graft

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Disclosure

Speaker name: Karan Garg, MD

I do not have any potential conflict of interest
Introduction

- Innominate artery injuries are rare
- Associated with high morbidity and mortality
- No dedicated endovascular solution
- Traditionally treated with open surgical repair → Sternotomy
Endovascular Challenges

- Short vessel length
- Need for moderate sized, non-tapered device
- Delivery system length & angulation (if placed via CFA) vs retrograde
- Difficulty in deploying short device
Patient Presentation

- 87 year old female s/p tunneled catheter placement
- Pulsatile neck mass
Innominate Pseudoaneurysm
Iliac Leg Extension

- Part of Zenith Ancillary kit
- 3 internal z-stents
- Total length 55 mm
- Diameters 8-24 mm
- Increments of 2 mm
- Constant diameter (no tapering/flaring)
Iliac Leg Extension

- With top stent removed
- Total length 38 mm
- Re-sheathed
Intraoperative Angiogram
Post Stent Deployment
Postop CT Angiogram
Prior cases

- 46 yo man
- 3 mo S/P right hemicolecctomy for adenoCA
- S/P Sternotomy for trauma 15 yrs ago
- Admit for Port placement prior to Chemo
- Recognized Right Carotid puncture (dilator placed)
- Hypotensive
- OR for emergent exploration
Chest X-Ray

Pre-op

No PTX

Widening of mediastinum

Cath tip overlying Atrium

Tracheal deviation towards right
Prior Imaging for Sizing

Length = 4 cm

Distal Innominate = 13.4 mm
Proximal Innominate = 13.5 mm
Innominate Pseudo
Tracheo-innominate Fistula

- 64 year old female s/p CVA
- Developed tracheo-innominate fistula (TIF) 6 weeks following tracheostomy
- History of sternotomy for CABG
- Hemodynamically unstable
- Tracheostomy balloon over inflated
Successful management of tracheo-innominate artery fistula with endovascular stent graft repair

Jun-o Deguchi, MD,a Takatoshi Furuya, MD,a Nobutaka Tanaka, MD,a Masakazu Nobori, MD,a Yasuo Seki, MD,a Yukihiro Nomura, MD,a Isao Umehara, MD,b Haruhisa Saito, MD,c and Tetsuro Miyata, MD,d Tokyo, Japan

Stent Graft Placement for a Tracheoinnominate Artery Fistula

Douglas A. Troutman, Matthew J. Dougherty, Adam I. Spivack, and Keith D. Calligaro, Philadelphia, PA

Endovascular Repair of a Tracheoinnominate Fistula with a Stent Graft

Marcelo Guimaraes*, Claudio Schönholz*, Travis Phifer†, and Horacio D’Agostino‡
Summary

- Off-label solution for emergent problem
- Vessel with no indicated off-the-shelf graft
- Obviates need for complex open surgery
- Retrograde approach preferred
- Challenges of deploying short device
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