Speaker name: Colin Bicknell

I have the following potential conflicts of interest to report:

Consulting

Medtronic, Orzone

Travel and Speakers fees

Bolton Medical, Gore, Vascutek

Institutional level funding

Orzone
LONG TERM FAILURE OF TEVAR
HELI-FX ABDOMINAL AND THORACIC SYSTEM

Heli-FX Thoracic EndoAnchor System

18Fr OD, 90cm working length

Heli-FX EndoAnchor System

16Fr OD, 62cm working length
INDICATIONS

• Utilise in right circumstances
• Indications:
  • Arch to augment sealing/prevent bird beaking and seal endoleaks
  • Conical distal neck
  • Ensure repair fixation

Courtesy of Medtronic
DEGENERATION AND DILATATION AND UPWARD DISTRACTION OF THE GRAFT LEADS TO TYPE 1B ENDOLEAK OVER TIME

INDICATIONS

- Utilise in right circumstances
- Indications:
  - Arch to augment sealing/prevent bird beaking and seal endoleaks
  - Conical distal neck
  - Ensure repair fixation
FORCES ON THE GRAFT ARE CRANIAL, NOT IN THE DIRECTION OF BLOOD FLOW, AND INCREASED WITH LARGER GRAFTS AND INCREASED PRESSURE

“A 36-mm endograft in the mid-descending aorta had a peak systolic DF of 27.8 N and an end-diastolic DF of 16.7 N.”

“The orientation of the DF varies depending on curvature and location of the endograft, but in all instances, it is in the cranial rather than caudal direction.”

DISTAL THORACIC APPLICATIONS – CONICAL NECK
DISTAL THORACIC APPLICATIONS
INDICATIONS

- Utilise in right circumstances
- Indications:
  - Arch to augment sealing/prevent bird beaking and seal endoleaks
  - Conical distal neck
  - **Ensure repair fixation**
For emergencies or treating a type 1 endoleak on table

- Align the C arm so that you have the markers lined up with the lateral projection (40-50 LAO)
- Put in the sup/inf ones two rows (or more)
- Then to move around the aorta you need to tilt the C-Arm cranio-caudal and caudo-cranial (0CRA-15CRA-30CRA-15CAU-30CAU)
- Adjustment of the lateral projection in order to align markers of the device
Otherwise plan case beforehand, dedicated C arm angles needed for planning

- 3mensio to estimate the projections of the C-Arm (or a software with markers that you can see in the 3D).

H Rousseau
Medtronic Aortic and Peripheral Vascular Magazine
http://www.endovascularmagazine.eu/
LEARNING CURVE

- Some experience necessary to attain good endoanchor placement
- Start with infrarenal segment
  - Conical neck
  - Dilated necks
- Thoracic segment after proficiency
- Utilise different guides for arch
- Zipper technique
- Place in rows
- PATIENCE

Use of the 22 mm Guide can facilitate EndoAnchor placement on outer radius of the aortic arch

Guide selection can dictate EndoAnchor placement on the inner radius in the aortic arch

32 mm Guide
LEARNING CURVE

….unless you are a genius and can do this

J Panneton
ENDOLEAKS

Utilise experience from infrarenal segment

- Extend if you can
- Identify leak channel
- Fix contralateral side
- Rows of endoanchors around leak channel

- It isn’t magic, it wont make you a landing zone
ENDOLEAKS

Images courtesy of Firas Mussa MD, Bellevue Hospital: New York, NY
ENDOLEAKS

Utilise experience from infrarenal segment

- Extend if you can
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- Rows of endoanchors around leak channel
- Zipper technique

- It isn’t magic, it wont make you a landing zone

LIMITATIONS OF ENDOANCHOR™ IMPLANTS
CONCLUSIONS

Get the right indication
Utilise different placement strategies for different indications

CT evaluation for all cases, avoid thrombus/Ca
Arch planning important

Get through the learning curve first
Have patience in placing accurately
Utilise some tricks that experience has taught us in the thoracic aorta
Come prepared to open more guides/anchors

Target endoleak effectively
Expect to place multiple rows cranially/caudally
Don’t get tricked into trying to create a landing zone when there isn’t
TIPS AND TECHNIQUES FOR UTILISING ENDOANCHORS IN TEVAR

COLIN BICKNELL

SENIOR LECTURER AND CONSULTANT VASCULAR SURGEON
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