Transperitoneal Reversed Elephant Trunk Technique

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No disclosures

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Thoraco-abdominal aneurysm repair
High morbidity and mortality rates even in high volume centres

Increasing Mortality Trends for Open Infrarenal and Thoracoabdominal Aneurysm Repairs in the Endovascular Era

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Reduced risks with hybrid techniques

Preserved dominant vertebral flow

Carotid-subclavian bypass

Occluder in subclavian artery

Aorto-inominate and bi-carotid bypass

Reduced risks with hybrid techniques

Moore et al: J Vasc Surg October 2005
Coronary artery

Endovascular aortic Replacement after Total debranching

Coronary artery
Endovascular Reconstructions - Branched and Fenestrated Technology:

- limited by the need for landing zones
- Not suitable for patients with Connective Tissue disorders
- requires specialized expertise and equipment
- branch stent failure

Endovascular aortic repair: Current techniques with fenestrated, branched and parallel stent-grafts

Performance of Bridging Stent Grafts in Fenestrated and Branched Aortic Endografting
CASE REPORT:
69Y female
Crawford Extent II thoracoabdominal aneurysm 7.2 cm
Severe COPD
CAD, previous PCI x2
Stage 1:
Total Thoracic Endovascular Coverage

- Cook Alpha
- 32mm x 209mm
- 34mm x 157mm

- 1 month delay to allow for cord collaterals to develop
Literature Review:

Reversed Frozen Elephant Trunk Technique to Treat a Type II Thoracoabdominal Aortic Aneurysm

E. Sebastian Debus, MD, PhD\textsuperscript{1}, Tilo Kölbel, MD, PhD\textsuperscript{1}, Sabine Wipper, MD, PhD\textsuperscript{1}, Holger Diener, MD\textsuperscript{1}, Beate Reiter, MD\textsuperscript{2}, Christian Detter, MD, PhD\textsuperscript{2}, and Nikolaos Tsilimparis, MD, PhD\textsuperscript{1}

• Used in a 29Y Marfan’s patient with previous TEVAR for a complicated Type B dissection
• “Turned around” Anaconda Thoraflex device
• Avoided morbidity of open thoracic component and proximal clamp
Thoraflex Hybrid

Health Canada Approved Device

Open repair combined with endovascular stent
Stage 2: Transperitoneal Retrograde Elephant Trunk Repair:
• 38 x 150mm
• Thoraflex

• 38 x 117mm
• Cook Alpha
Ligation celiac axis with renal-hepatic bypass
3 month Follow up:

A: reno-hepatic bypass
B: right renal branch
C: SMA branch
D: left renal branch
Avoids risks of thoracotomy
Staged approach may preserve cord collaterals
Avoids visceral patch aneurysm
Standard transperitoneal techniques familiar to all vascular surgeons
Potential for double Thoraflex procedure

3 more patients booked for repair

Modifications to device and branch sizing will improve utility