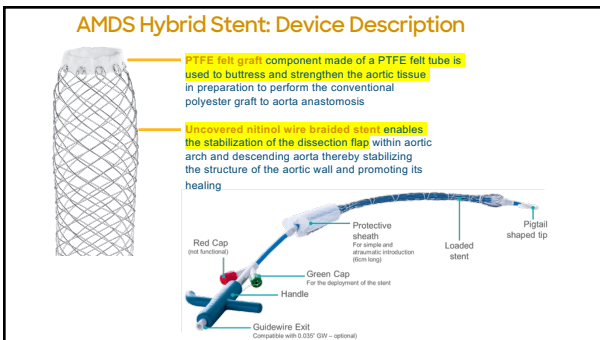




Disclosures

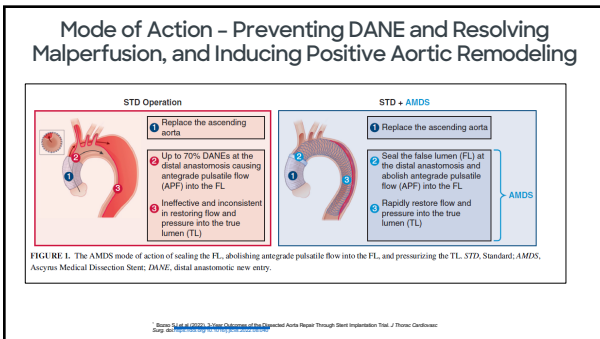
Consultant and Advisory Board Member
Terumo Aortic

2



Benefits of AMDS

- 1) Prevention of Distal Anastomotic New Entry Tear (DANE)**
 - Elevates and supports the intimal flap
 - Reduces tension on the suture line
- 2) Resolution of Malperfusion**
 - AMDS-induced expansion of the true lumen demonstrates over 95% resolution of vessel malperfusion.
- 3) Reduction in Major Adverse Events (MAE's)**
 - At 30-days, AMDS significantly reduces MAE's.
- 4) Promotes Positive Aortic Remodeling**
 - Total Aortic Diameter Stabilization



Case 1 Clinical History

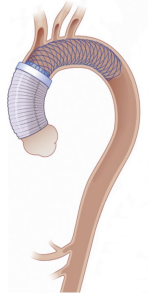
63 yo woman presents to and OSH with acute onset severe chest and back pain in association with ATAAD with mild visceral and peripheral malperfusion

PmHx:

- Known 4.6 cm ascending aneurysm dx late 2022
- Mild AI
- NI LVEF
- HTN
- HLP

Pre-Operative CTA Findings at OSH

- Acute Stanford type A dissection extending from the aortic root into the bilateral common iliac arteries
- Dissection extension into the right common carotid artery, left subclavian artery and the major abdominal vessels including the superior left renal artery.
- Associated aneurysmal dilatation of the ascending thoracic aorta measuring up to 4.9 cm.
- Segmental non-opacification of the right common and external iliac artery system with thrombosis with distal reconstitution at the common femoral artery, likely secondary to collateral flow.
- Acute left superior pole renal infarction

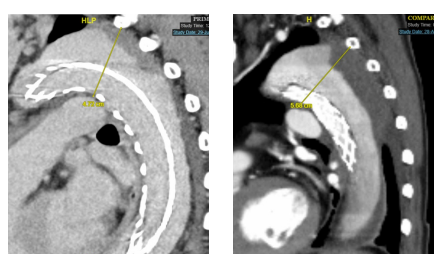


Operative Repair at OSH of ATAAD in May 2023

Repair of an ATAAD with right iliofemoral and left renal malperfusion using deep hypothermic circulatory arrest (19.9 Degrees Celsius) and retrograde cerebral perfusion

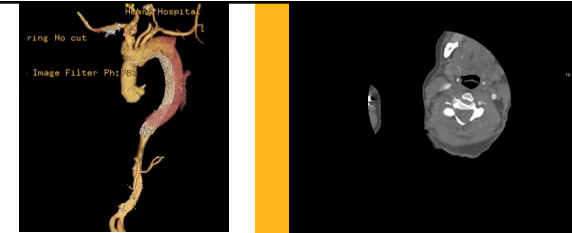
Ascending aortic replacement (28 Gelveave)
 Antegrade TEVAR (AMDS 55 mm x 210 bare-metal stent)
 Ultrasound-guided placement of an 8 French arterial sheath in the right femoral artery
 Intravascular ultrasound (IVUS) of the thoracic and abdominal aorta

Post-Operative Imaging



June 29, 2023 August 28, 2023

CT Imaging




- Repeat imaging upon presentation to clinic
- Aneurysmal portion of the aorta measured 5.3 cm
- False lumen partially thrombosed with continued contrast enhancement

Operation

- Staged Left carotid subclavian bypass
- Following redo sternotomy, redo R axillary cannulation cooled to 22°, circulatory arrest and antegrade cerebral perfusion performed
- The previous ascending Dacron graft was transected and a single branch Thoraflex Hybrid Graft placed
- The 28x150 mm TEVAR stent portion of the graft was delivered into the descending aorta and deployed
- Debranching of the BCA and Left Carotid via Y Graft sewn to Thoraflex side branch
- The proximal aortic anastomosis was performed and perfusion restored

Why Thoraflex Hybrid?


Disadvantages



CET (Classic Elephant Trunk)

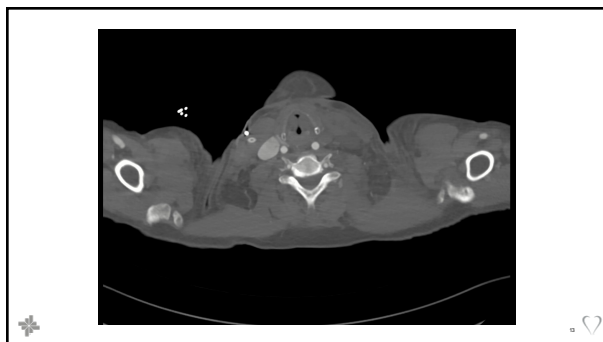
- Requires 2nd Stage: offers arch repair only
- No structural support for DTA; no TL expansion/thrombosis of False Lumen
- Distal anastomosis can leak/bleed (Type 1a)
- Potential to kink (need to implant zone 3)
- Often requires fenestration of septum for dissection
- Difficult to cannulate/access (guidewire - 2nd stage)

Advantages



Thoraflex Hybrid

- Can offer the patient a single stage aortic arch repair (arch/DTA)
- Allows anatomical treatment of most Aortic Arch Pathologies
- No type 1a Endo-leak for anastomosis
- Facilitates supra-aortic vessel re-implantation
- Offers a good 'bridge' from arch to DTA
- DTA stent provides a haemostatic seal (not dependent on sutures)
- Provides good landing zone for 2nd stage endovascular
- Restore TL patency/occlude FL
- Stent cover of intimal tears



This is a lateral CT scan of the thorax, showing the aorta and the placement of a TEVAR extension. The extension is visible as a dark, curved structure along the length of the aorta.

Distal TEVAR Extension

- POD 30
- Two distal TEVAR extensions with Terumo Relay Pro 30 x 150mm, 32 x 150mm.
- Discharged 3 days following procedure

Follow Up Imaging

This slide shows follow-up imaging. On the left is an axial CT scan of the thorax, similar to the first slide. On the right is a 3D reconstruction of the aorta and the TEVAR extension, showing the extent of the stent graft. The text 'Phx 2000' is visible on the 3D model.

Key Take Aways

- AMDS and other similar stents are effective at limiting new DANE's and resolving malperfusion
- However, cases of disease progression can lead to:
 - AMDS compression or collapse
 - Continued false lumen flow
 - Aneurysmal degeneration
- Thoraflex Hybrid is uniquely positioned to rescue the AMDS and promote positive aortic remodeling.

Thank You

This slide features the text 'Thank You' on the left and a photograph of a modern hospital building at night on the right. The building is illuminated, and the sky is dark. There are small white asterisks in the bottom left and right corners of the image area.