A PETTICOAT Stent-graft Procedure Utilizing The Zenith Dissection Endovascular System, In An Unusual Case Of Type B Aortic Dissection, With Distal Aortic Pseudoaneurysm

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Disclosure

Speaker name:

I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
Initial Presentation

• 70 yo female patient with severe CAD and uncontrolled HTN presented with tearing chest pain and hypertension.

• Found to have acute symptomatic progression of an intramural hematoma and penetrating aortic ulcers in the descending thoracic aorta identified.

• CTA showed a descending thoracic aorta proximal intimal flap and a thin intramural hematoma.

• Initial treatment involved anti-impulse control therapy, followed by discharge.
Initial Presentation

• Symptoms resolved with medical management but patient returned one month later with severe interscapular pain.

• Repeat CTA showed progression of the intramural hematoma to a complete dissection extending to the suprareiac aorta and a new prominent pseudoaneurysm in the supraceliac aorta.

• Due to symptomatic presentation and imaging changes, the aortic condition was deemed unstable, prompting endovascular repair.
Surgical planning

- Proximal landing zone was 20 mm in length and 28 mm in diameter, distal to the left subclavian artery.
- Supraceliac aorta measured 25 mm in diameter.
- Preoperative CTA did not provide an estimate of the length of the distal landing zone.
- Intraoperative IVUS planned to assess the healthy distal aorta and evaluate the need to cover the celiac artery.
- The PETTICOAT Zenith Dissection Endovascular System was selected.
- The primary goal was to remodel the aortic wall without covering the entire descending thoracic aorta, reducing the risk of spinal ischemia.
Procedure

- Percutaneous femoral access was established followed by aortograms and IVUS to evaluate the aortic wall, landing zones, and to mark the subclavian and celiac arteries.
- Zenith Dissection Endovascular System (Cook Medical) was deployed - 32 mm by 142 mm covered proximal component and 36 mm by 180 mm distal bare metal stent component.
- Repeat aortogram and IVUS revealed an unsealed distal pseudoaneurysm, leading to the decision to place a covered stent-graft over that area.
- A Gore Conformable Thoracic Aortic Graft (CTAG) was chosen, landing just proximal to the celiac artery's takeoff.
- Prior to CTAG deployment, catheterization of the visceral branches was performed to ensure collateral perfusion of the celiac artery from the SMA.
- After the deployment of a CTAG 28 mm by 10 cm length, the distal aortic pseudoaneurysm was successfully sealed, preserving the celiac artery.
Thank You