

Misadventures of revisional surgery on an endovascular aortic repair with progression of disease

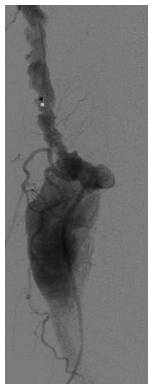
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Introduction

Re-operative treatments for previous endovascular aortic repairs have become more complex as past treatment modalities have been found to not meet the standard of care.

Patient is a 69-year-old male presenting with an enlarging AAA despite EVAR in 2014 with an Endologix endograft as well as an atrophic left kidney due to failed stent placement.

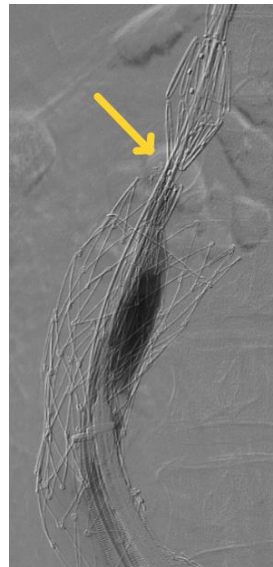
Patient has a family history of aneurysms. He was found to have an enlarging aortic aneurysm secondary to type 1a and III endoleaks (6.3x4.5 cm), bilateral common iliac aneurysms (left 3.6 cm, right 3.3 cm), bilateral common femoral aneurysms (left 2 cm, right 2.1 cm) and a left popliteal aneurysm (4.3x10cm) all meeting size criteria for treatment. He also had an aneurysmal aortic root and descending thoracic aortic aneurysm (4.1cm) not meeting criteria for treatment.



Picture 1: pre and post left popliteal stent placement



Picture 2: Zenith stent graft entrapped in endologix intraluminal struts



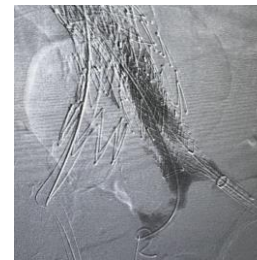
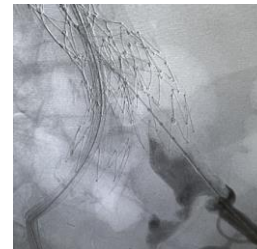
Picture 3: Partial deployment of Zenith stent graft showing candy wrapping requiring angioplasty to unravel

Case

Patient was treated in a staged approach.

Stage 1: Endovascular left popliteal and SFA Viabahn covered stent placement (picture 1), angioplasty of the left TP trunk, 2 visceral vessel (SMA and right renal) Zenith FEVAR.

Stage1 difficulty: Tortuosity and aortic anatomy, patient height making it difficult to deliver a sheath to the left popliteal artery, Endologix intra-luminal stent causing wires getting entrapped (picture 2), and candy wrapping of the Zenith FEVAR device (picture 3).



Picture 4
Top: left common iliac aneurysm
Bottom: S/p IBE placement

Stage 2: Bilateral common femoral artery cutdown with Dacron interposition, EVAR with Gore excluder bifurcated endograft, left iliac IBE, right embolization of the internal iliac artery with right limb extension of the external iliac.

Stage 2 difficulty: Aortic tortuosity and previous stent placements hindering IBE placement (picture 4).

Total radiation was 6,980 mGy and ebl 2500ml.

The patient recovered and was discharged post op day 5, ultimately readmitted for failure to thrive and discharged to a rehab facility 3 days later.

Discussion

The case showcases a complex endovascular option for revision of previous EVAR and extensive aneurysmal disease, as well as the pitfalls encountered along the way.

No financial disclosures for the authors.