

Entering the Hostile Chest: Strategic Planning for Third-Time Reoperative Repair of Ascending Aortic Pseudoaneurysm in a Patient with History of Extensive Cardiac Surgery, Chest Wall Reconstructions, and Multisystem Comorbidities



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Introduction

- In cases of challenging cardiac surgery, strategic anesthetic planning is vital to improving patient outcomes
- We present a case of a 53-year-old male who experienced an inadvertent entry into ascending aortic pseudoaneurysm during surgical repair
- We discuss how our management led to a successful patient outcome.

Case

- 53M with HTN, CAD, prior MI, 2 DES to RCA; 30 pack-year smoker; alcohol & opioid use disorder
- Inferior STEMI therefore triple vessel CABG done
- 2 weeks post-CABG: PE with infarct, right heart strain; MSSA post-thrombectomy infection
- Presented with Chest pain, CT demonstrated ascending aortic pseudoaneurysm
- Initially: endovascular stent with innominate snorkel due to mediastinitis
- Later: cardiogenic shock from graft failure, stent removal, aortic & hemiarch replacement, partial sternectomy
- Anemic, Extensive bilateral IJ & left subclavian DVTs
- Third redo sternotomy with 7x7 cm pseudoaneurysm reconstruction

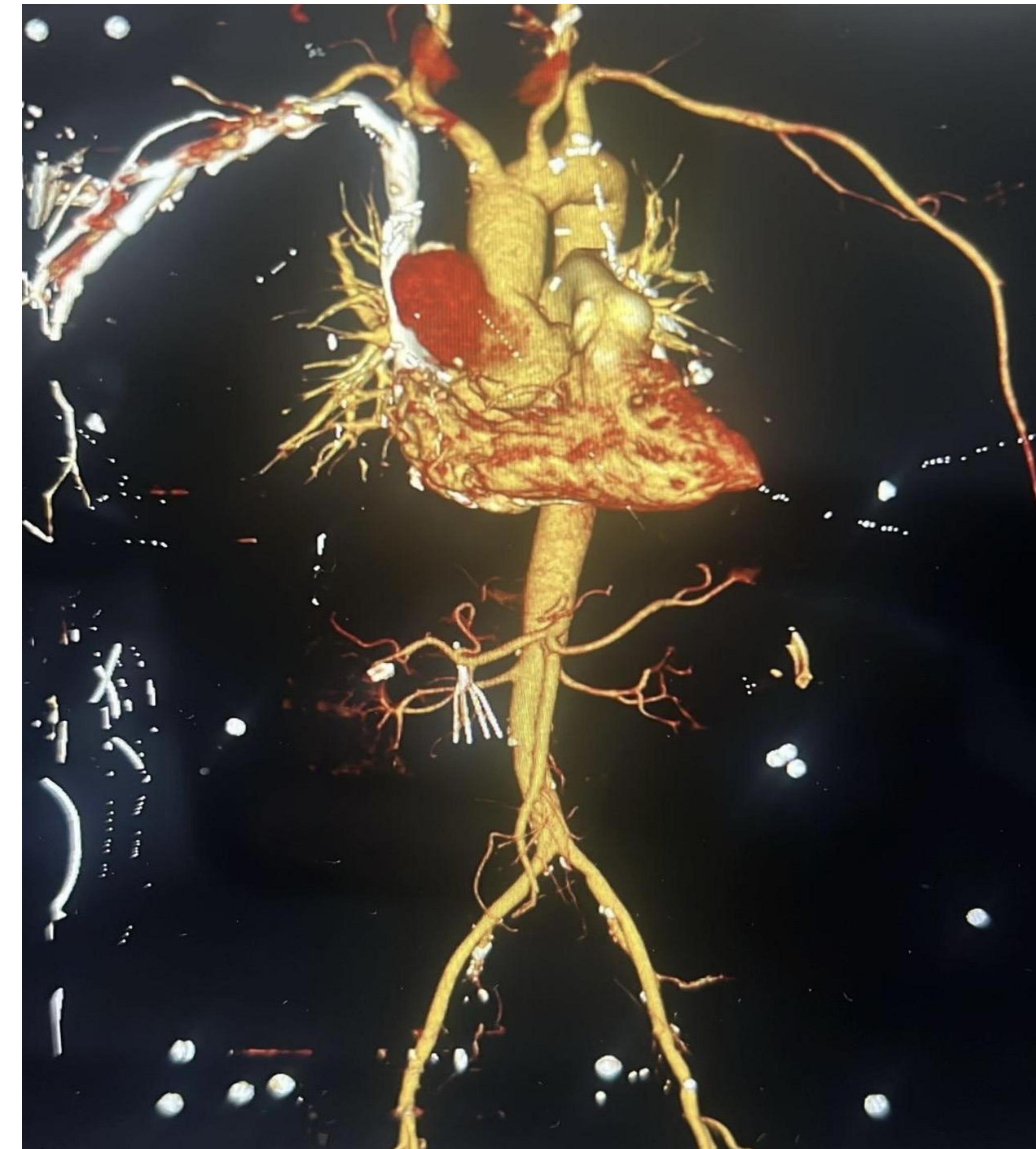


Figure 1 (above): 7x7 cm ascending aortic pseudoaneurysm

References:

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2. Ingoglia M, Pani S, Britton L, et al. Ascending aortic pseudoaneurysm. *J Cardiothorac Vasc Anesth.* 2011;25(6):1098-1100. doi:10.1053/j.jvca.2010.09.003

Discussion

- The incidence of Ascending Aortic Pseudoaneurysms (AAPs) is reported to be as low as 0.5%, however, higher incidence rates (13%) were reported after cardiac or aortic surgery ¹
- The most common predisposing cause is aortic root surgery followed by CABG ²
- Multidisciplinary Plan and Course:
 - Preoperative
 - Anemia corrected with IV iron and transfusions.
 - Cath lab: IVC filter removal, trialysis CVC placement (Rt subclavian), LAD occlusion identified.
 - Blood products typed and cross-matched; Belmont rapid infuser primed ready; two coolers in OR; blood bank ready for massive transfusion.
 - Defibrillator pads placed applied pre-induction.
 - CBP commenced prior to sternotomy
 - Intraoperative
 - Peripheral CPB cannulation; deep hypothermia before sternotomy.
 - Circulatory arrest initiated upon pseudoaneurysm opening; bleeding controlled.
 - Aorta cross-clamped; CPB restarted; cardioplegia administered.
 - Pseudoaneurysm repaired; TEE confirmed resolution.
 - Separated from bypass; anticoagulation reversed.
 - Coagulopathic bleeding corrected; chest closed; minimal pressors; patient transferred intubated to SICU.
 - Postoperative
 - Early extubation, stable in ICU
 - Subsequent cath lab: LAD stenting and IVC filter replacement.