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Endovascular Rescue of Failed Aortic Banding Used to Treat a Type IA Endoleak

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Disclosure

- None

Background

- Late type Ia endoleak is an uncommon complication after EVAR
- Open surgical and endovascular options for repair
  - Surgical conversion
  - FEVAR
  - Aortic banding
- Aortic banding was first described in 2003 as a “less-invasive” means to seal the endoleak

Patient Presentation

- 96-year-old male (Frailty Score 3/9) with abdominal pain, bilateral lower extremity claudication, and 10.4 cm AAA s/p EVAR
- Medical History: HTN, HLD, remote history of urologic cancer (in remission)
- Surgical History:
  - Gore Excluder EVAR for 5 cm AAA (17 years prior)
  - Aortic banding for asymptomatic 8.3 cm AAA with type Ia endoleak (6 weeks prior)
- Vital Signs: HR: 65 BP: 170/91 RR: 16 Temp: 36.4 C
- Physical Exam: pulsatile abdominal mass, palpable femoral pulses and pedal doppler signals

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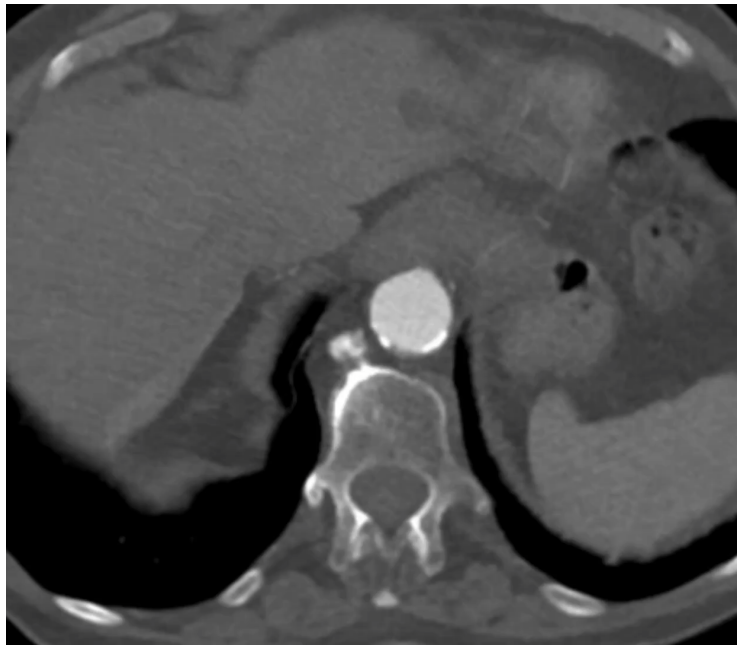
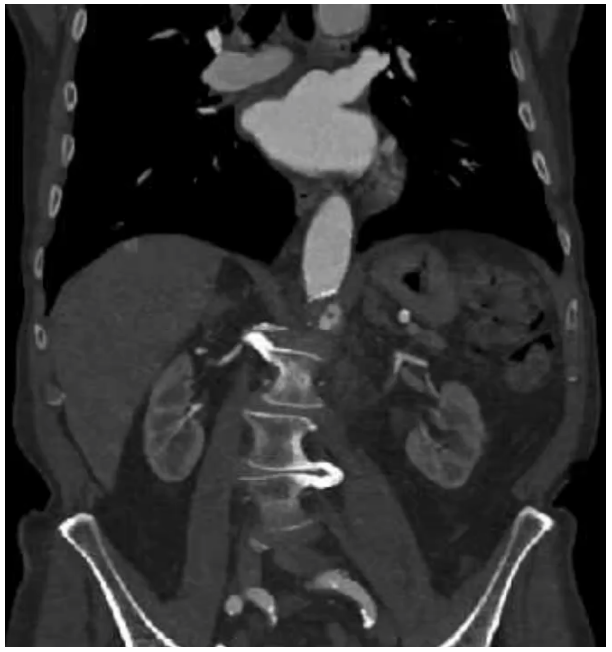
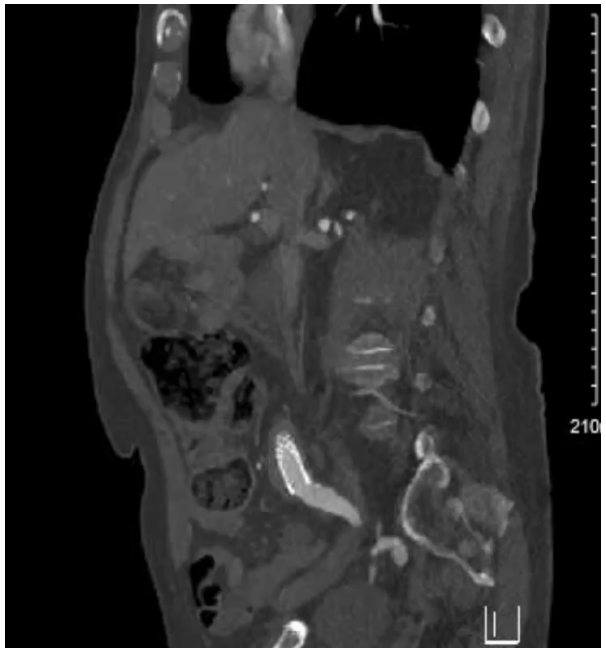
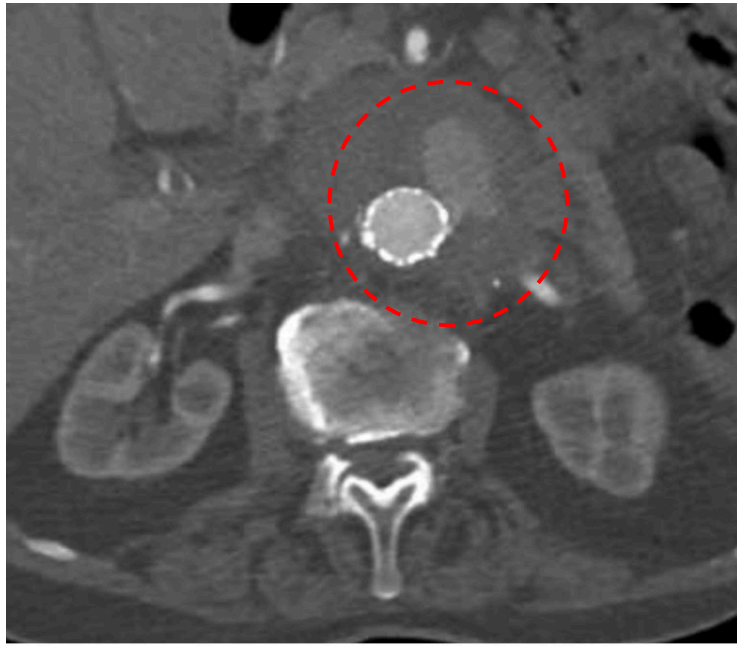
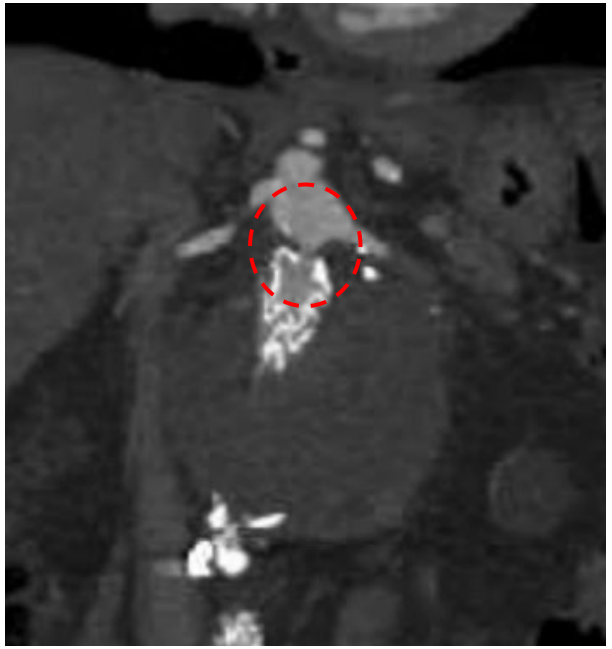
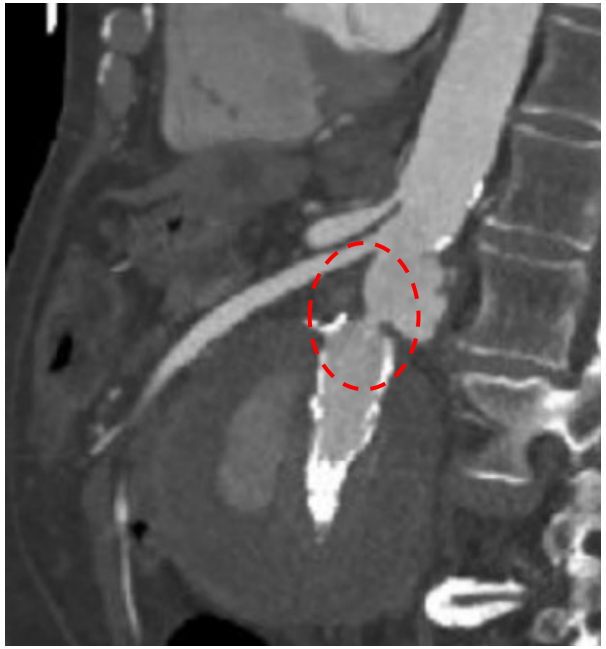
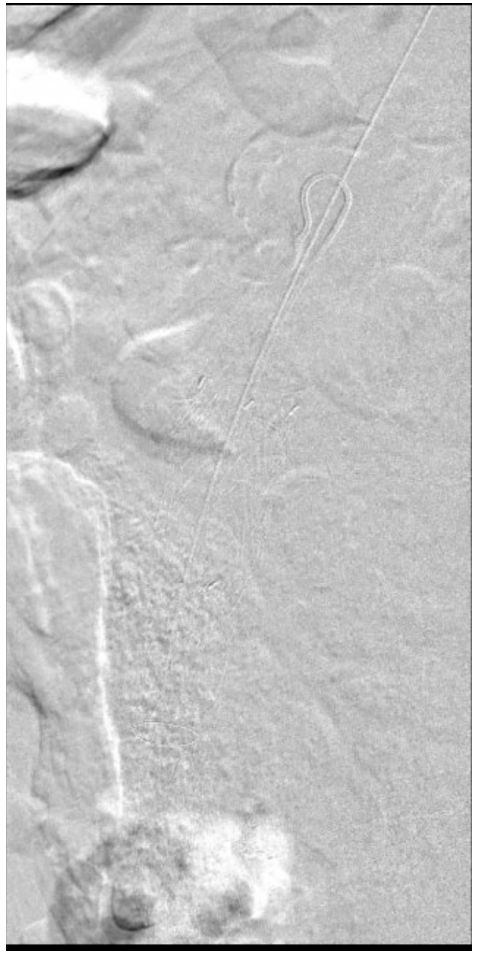
10.4cm AAA with migration of the endograft distal to the aortic band with Type Ia endoleak and juxtarenal stenosis measuring 6.5mm

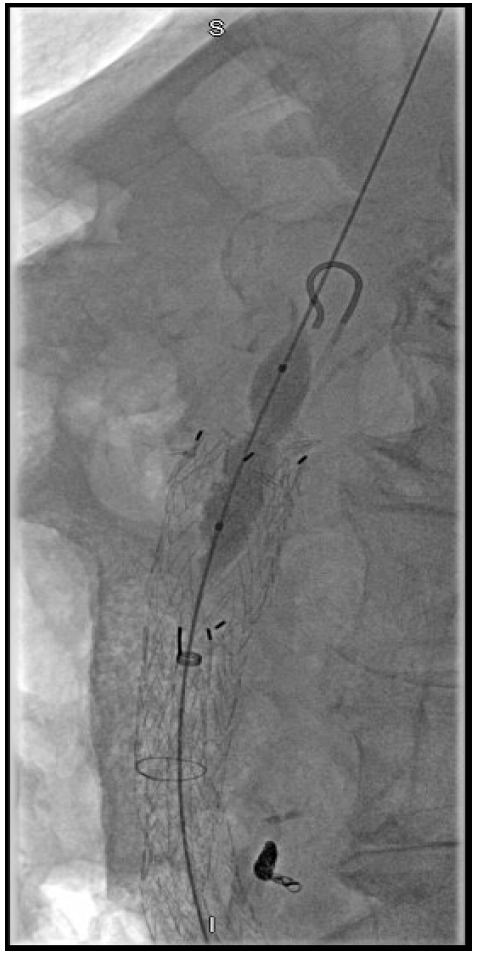
Management

- Admitted for blood pressure control
- Palliative care consult ➔ declined
- Repair planned for the following day

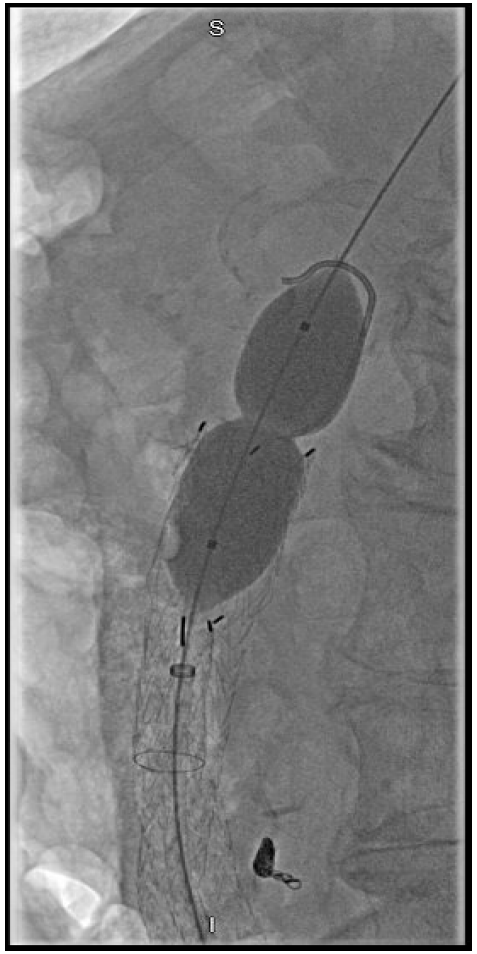
Serial Dilation



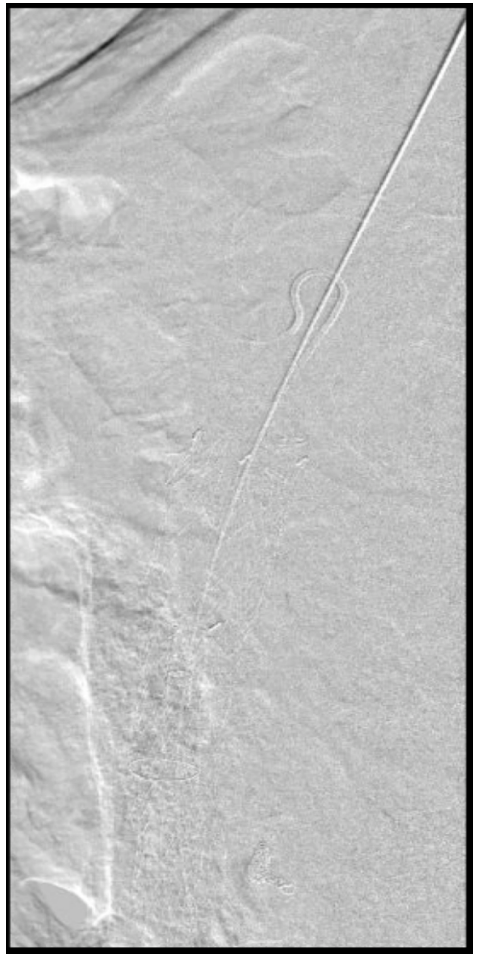
Initial aortogram



12mm dilation



20mm dilation



Post-dilation

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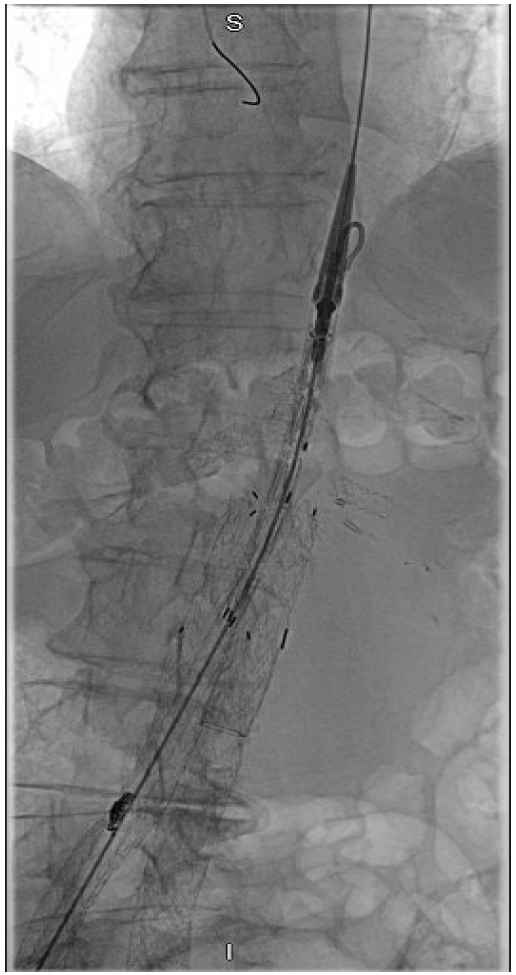
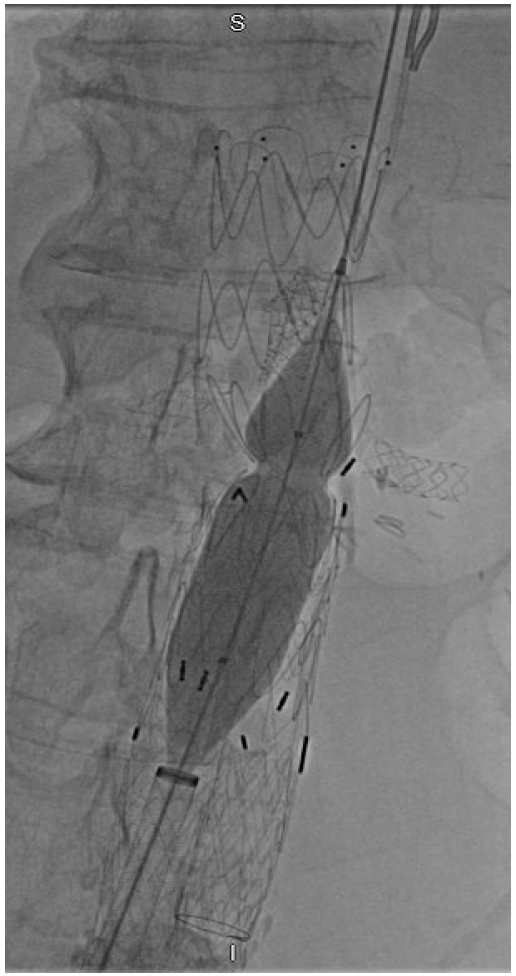
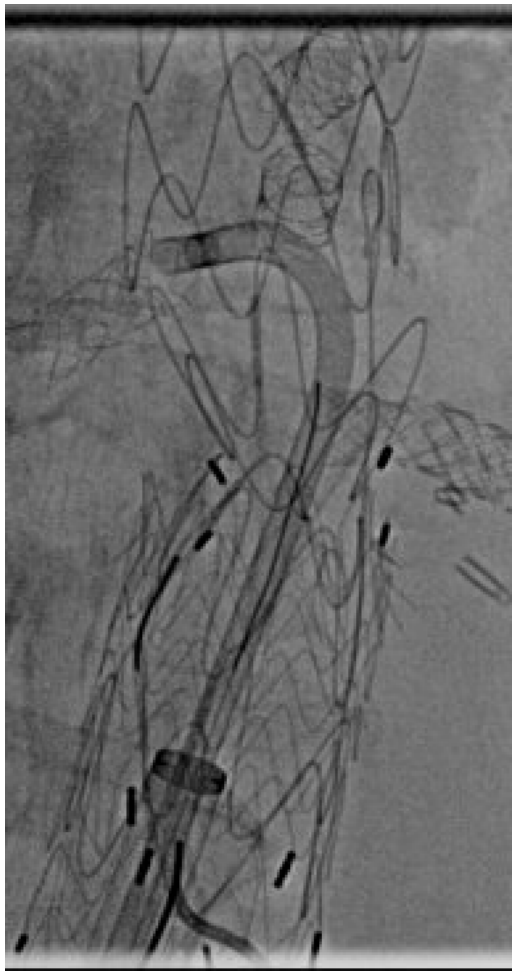
In Situ Laser FEVAR



Terumo RelayPro
28 x100mm



Endograft deployed and
dilated



7Fr 7x55mm steerable sheath
CVX-300 1.8mm Excimer laser

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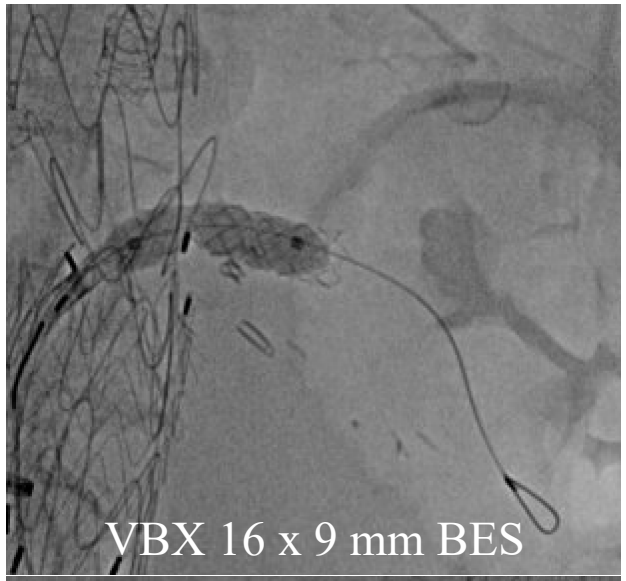

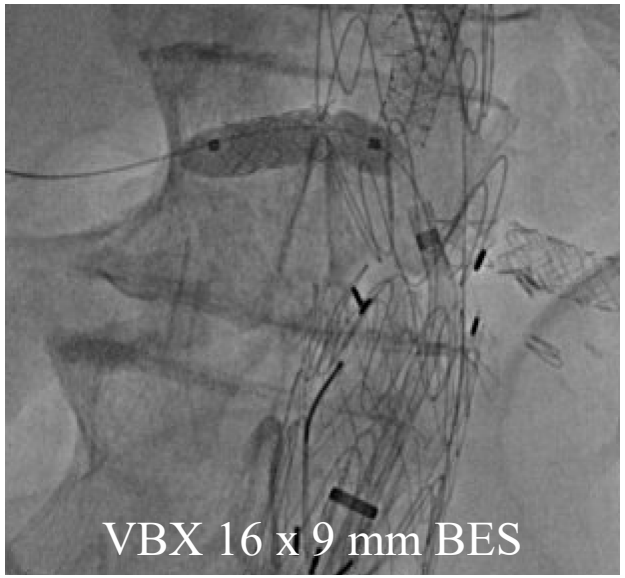

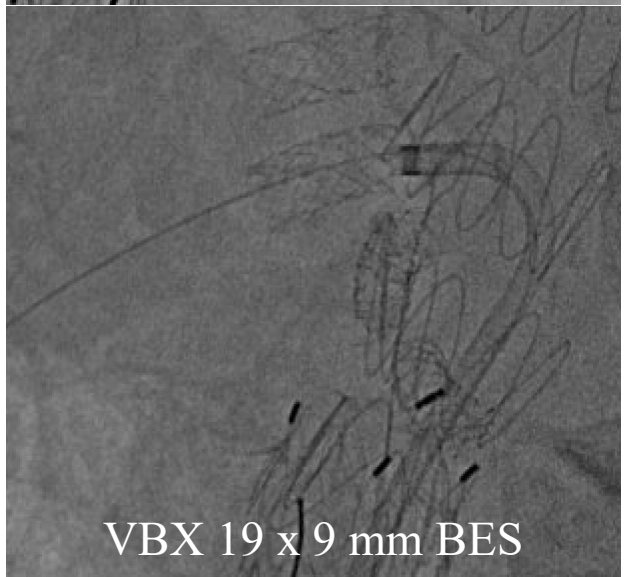

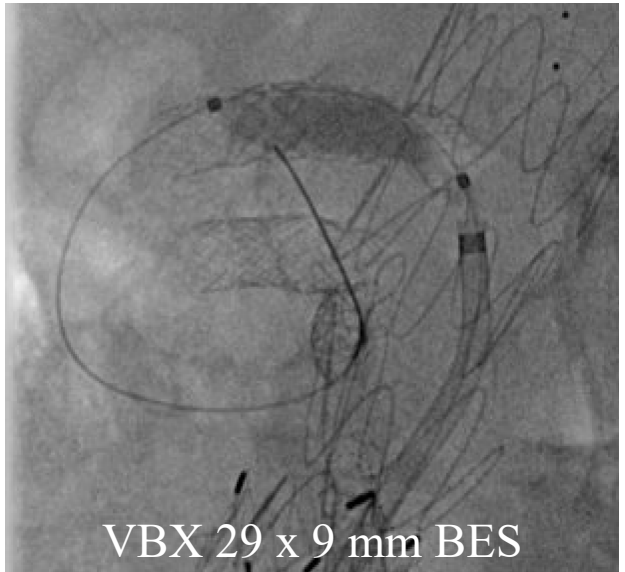

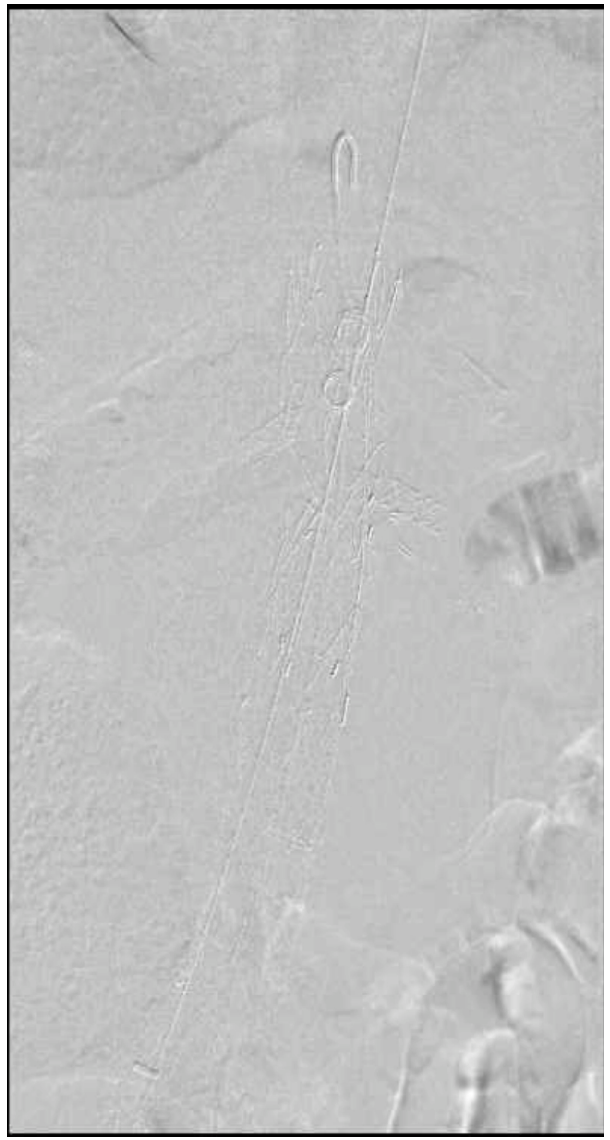

Postoperative Course

- No neurological deficits or acute kidney injury
- Abdominal pain resolved
- Bilateral pedal pulses palpable
- Discharged to home on POD 2

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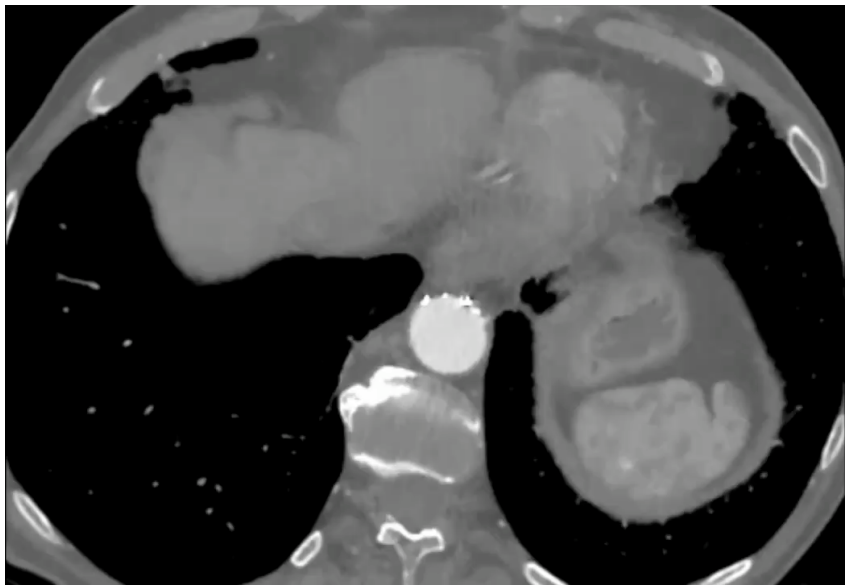
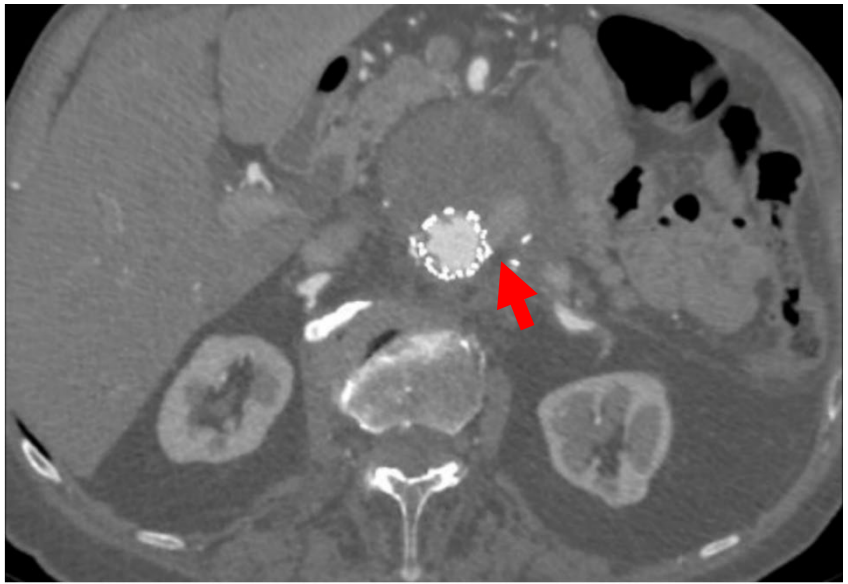
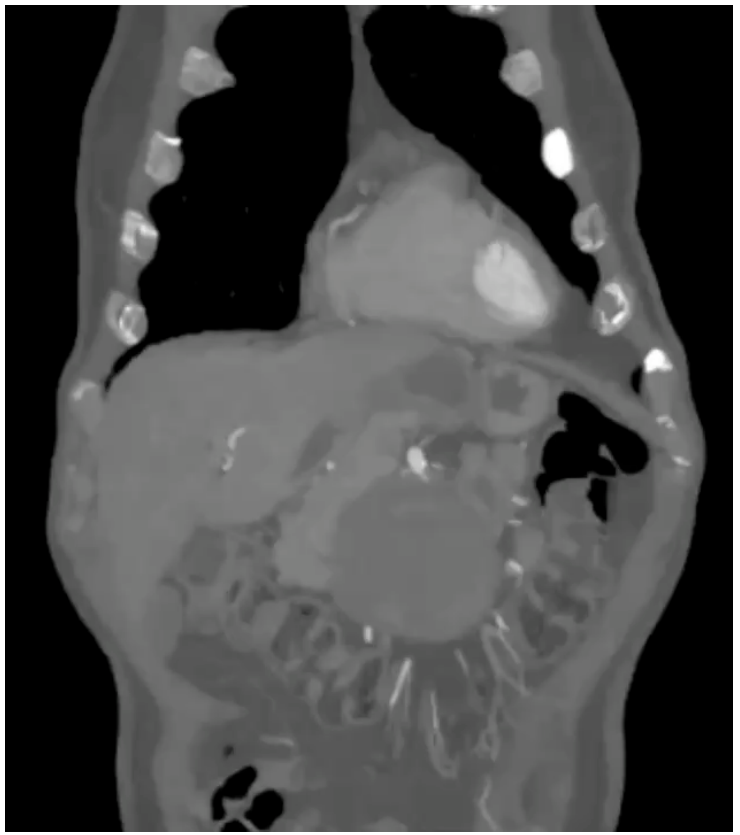
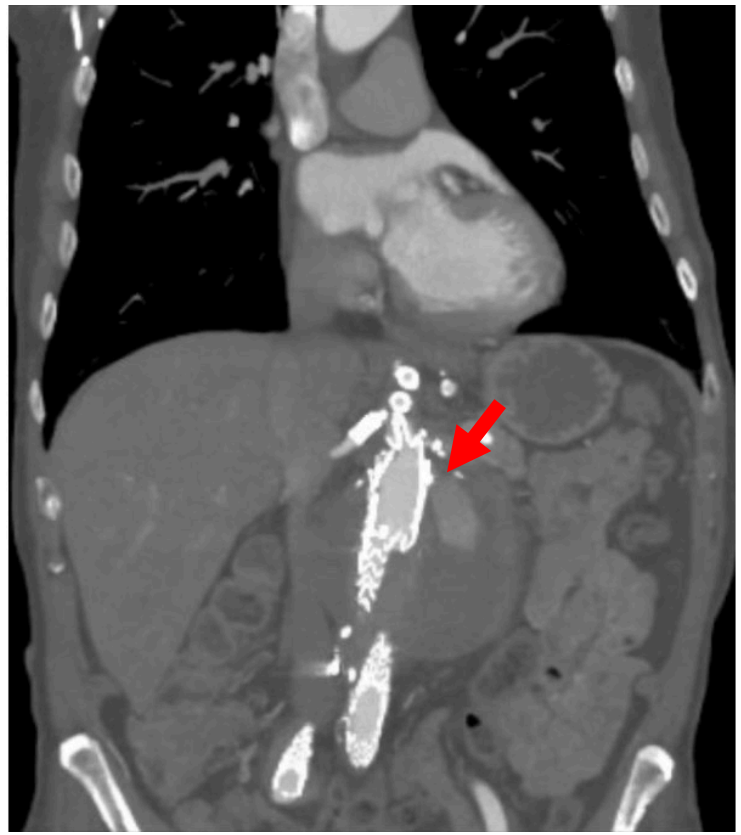
1M CTA



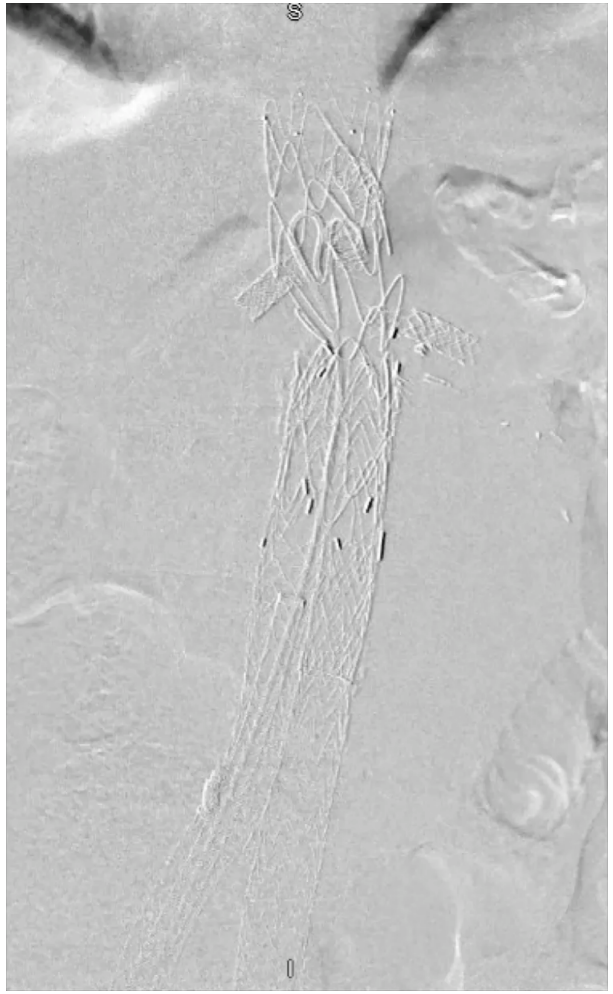


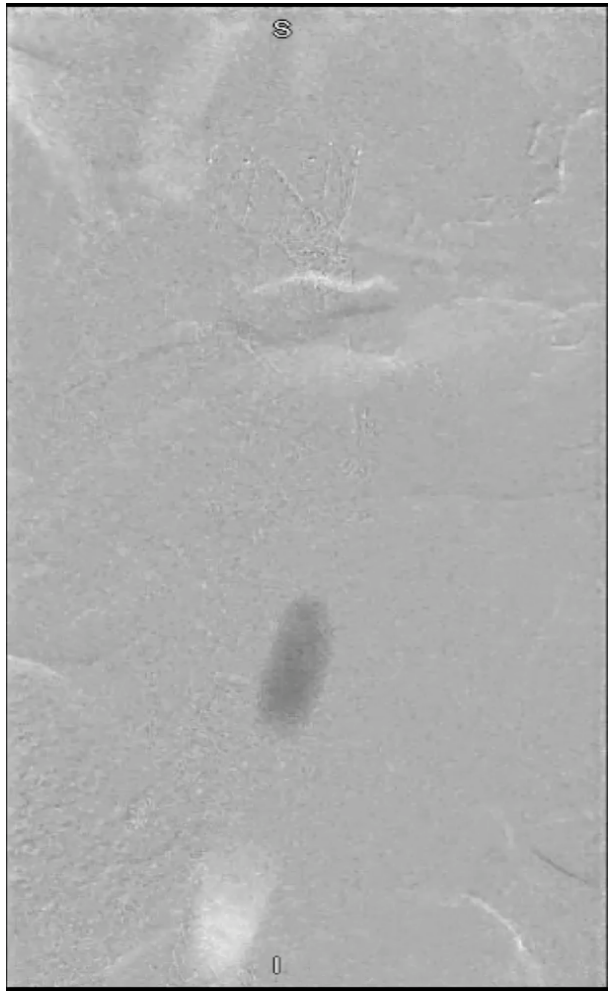




Small type IIIa endoleak at the junction of the Gore Excluder main body and the distal end of the Terumo RelayPro graft

Endoanchor Placement





- Aptus endoanchor placement
- Discharged on POD 1

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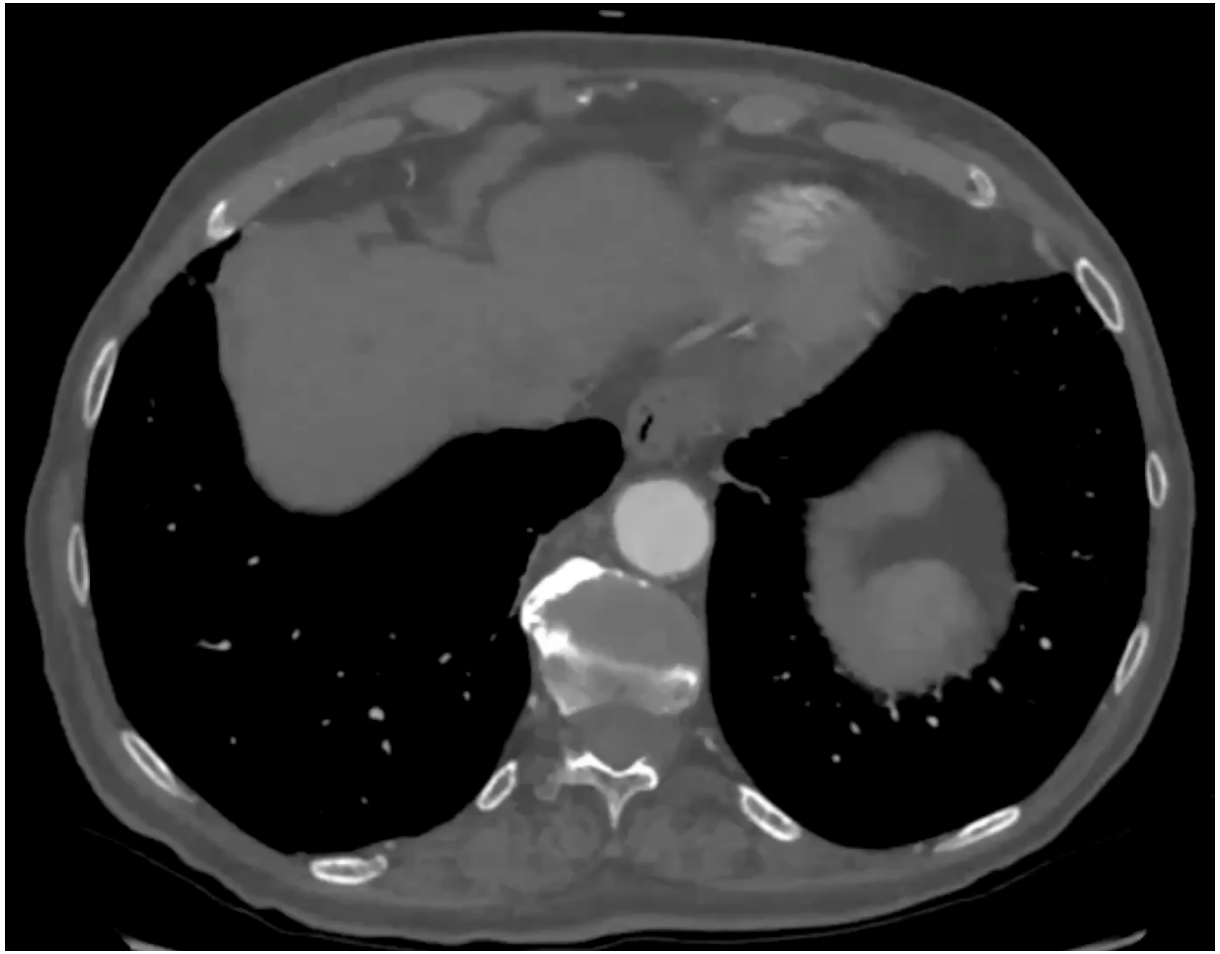
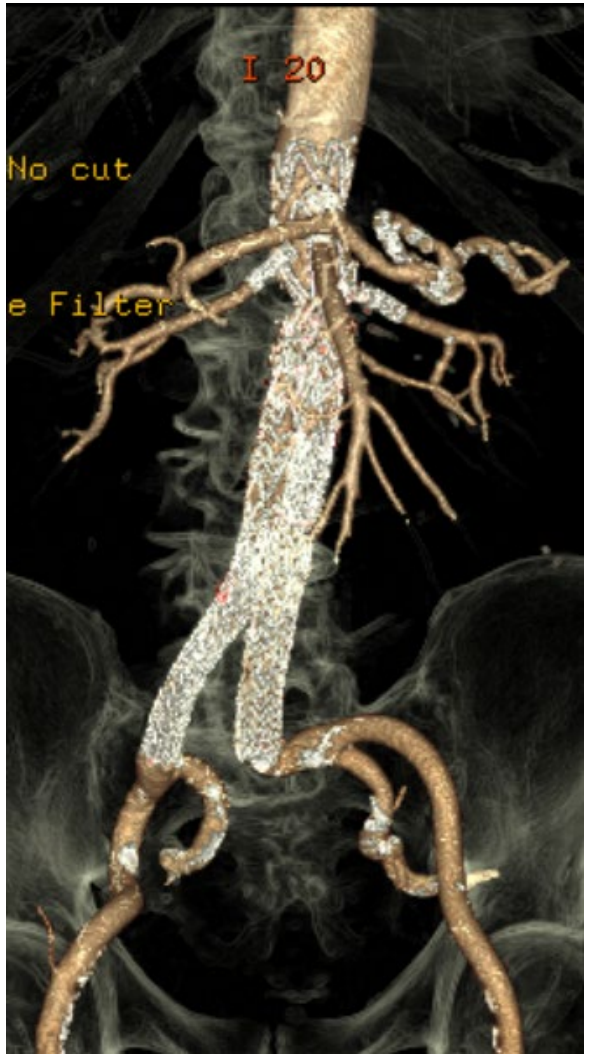
1M (post intervention) CTA





Discussion

- Aortic banding is intended to constrain a dilated aortic neck and restore apposition with the stent graft
- Used both prophylactically and therapeutically
- 120 cases of aortic neck banding reported from 2003 to 2026:
  - 79% early success without major complication or secondary intervention
  - Complications included persistent endoleak, rupture, and death
  - No reports of hemodynamically significant coarctation after aortic banding

Conclusion

- This presentation describes the first reported case of aortic stenosis as a complication of aortic banding and its treatment with balloon dilation and FEVAR
- Open repair with endograft explant remains the optimal repair option for late type Ia endoleak in patients with acceptable operative risk

Questions?