



CIRA Case of the Week

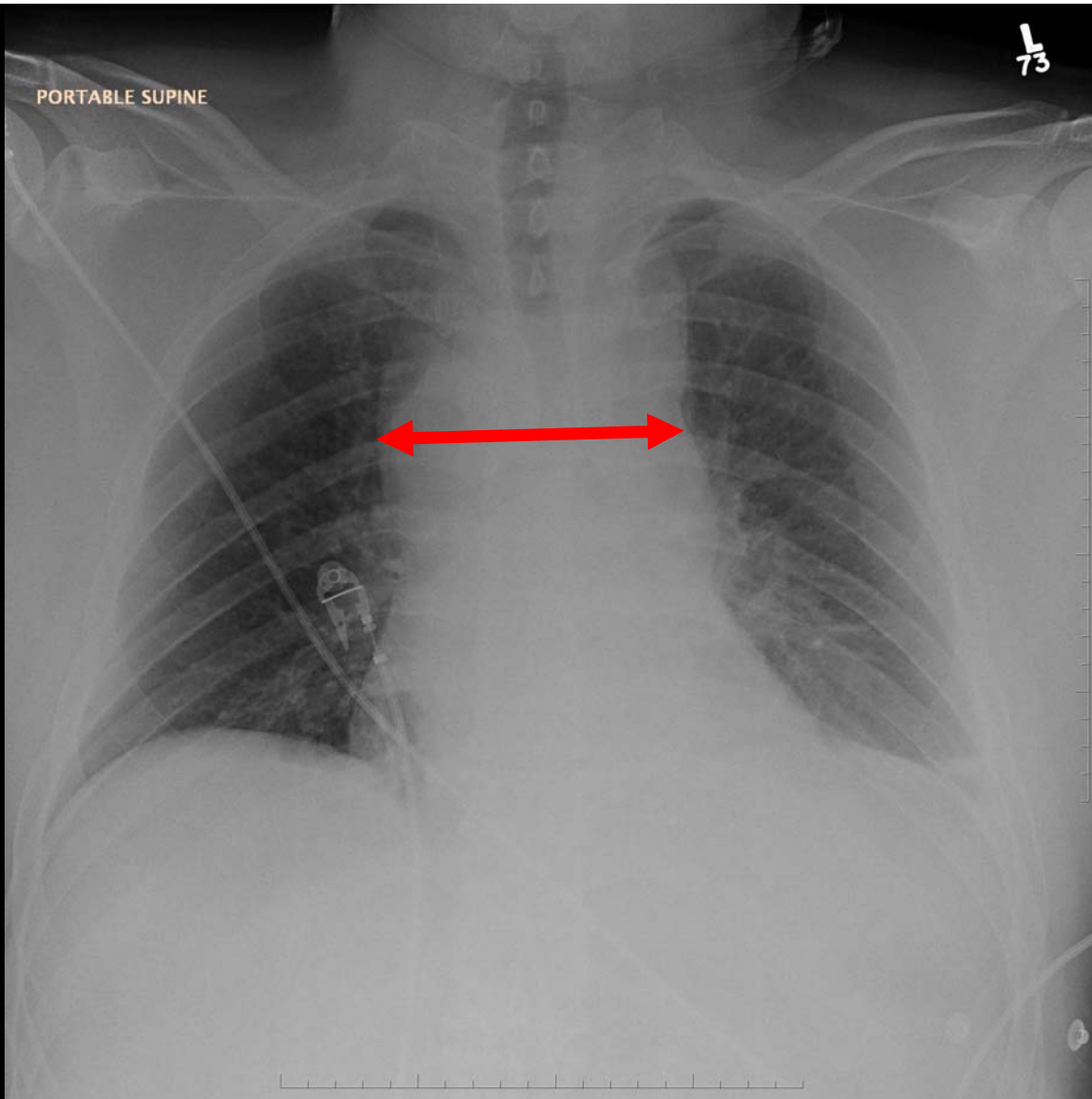
March 2017

Case Courtesy of Dr. Narayanan Thulasidasan
UHN Toronto

Case History

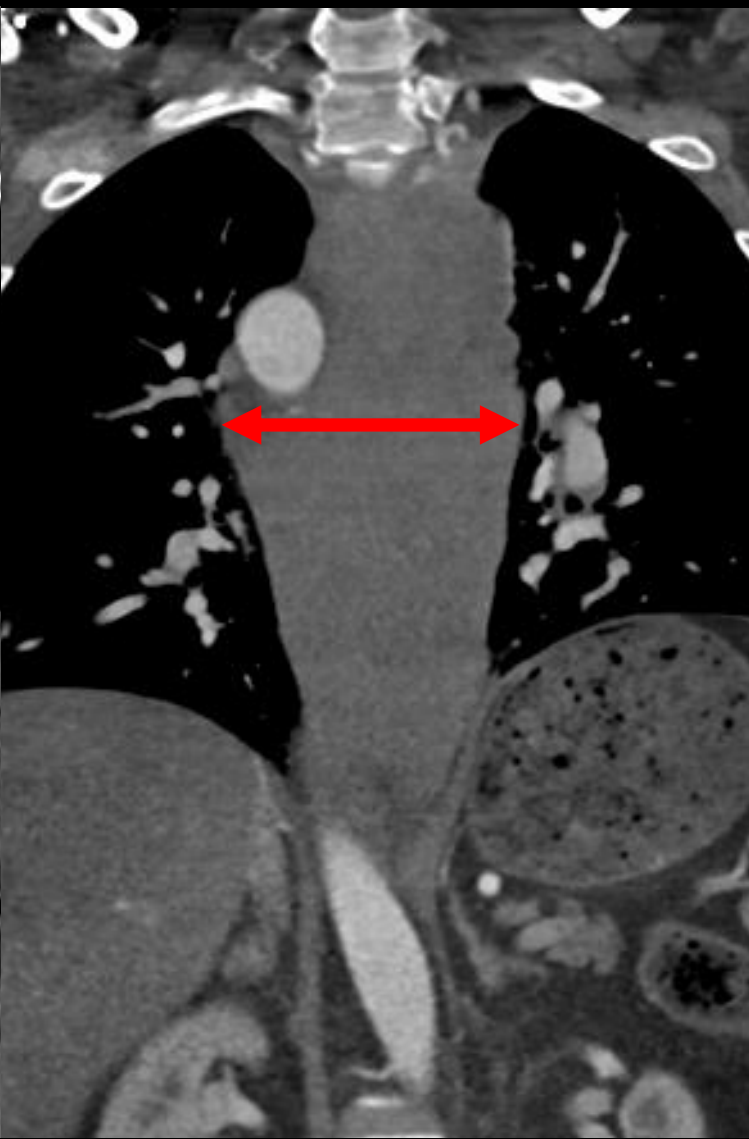
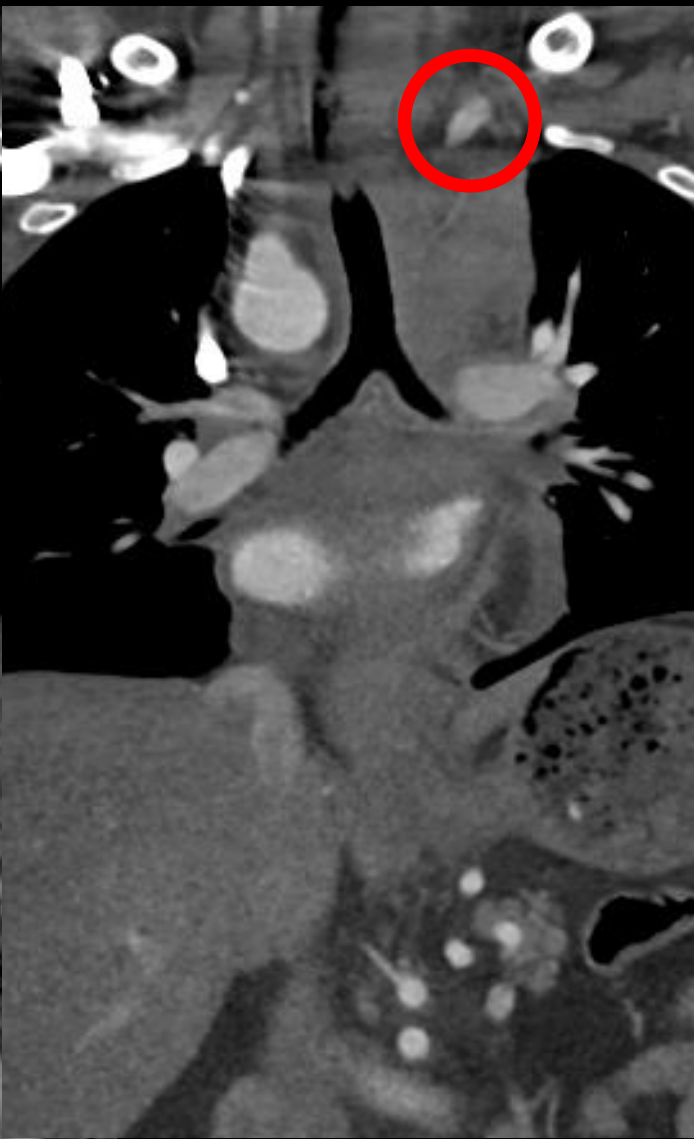
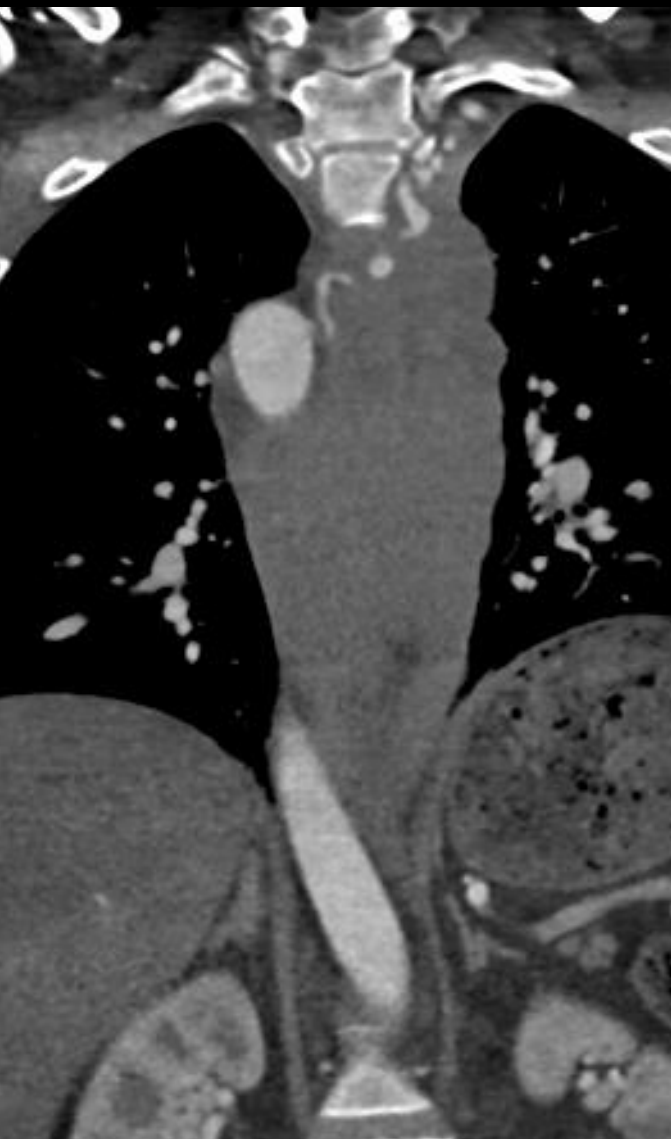


- 42 year old male
- Previously fit and well
 - Foreman and gun dealer
 - Father of two
- Sudden-onset of sharp chest pain - “worst pain I’ve ever had” - whilst eating dinner
- Presented to local ER and found to have severe hypertension (200/110)
- Bloodwork: Hb 142, WBC 14.1, Plt 242, Cr 118, Trop 5, CK 312



Widened
mediastinum...

...is he dissecting
his aorta?



Case History



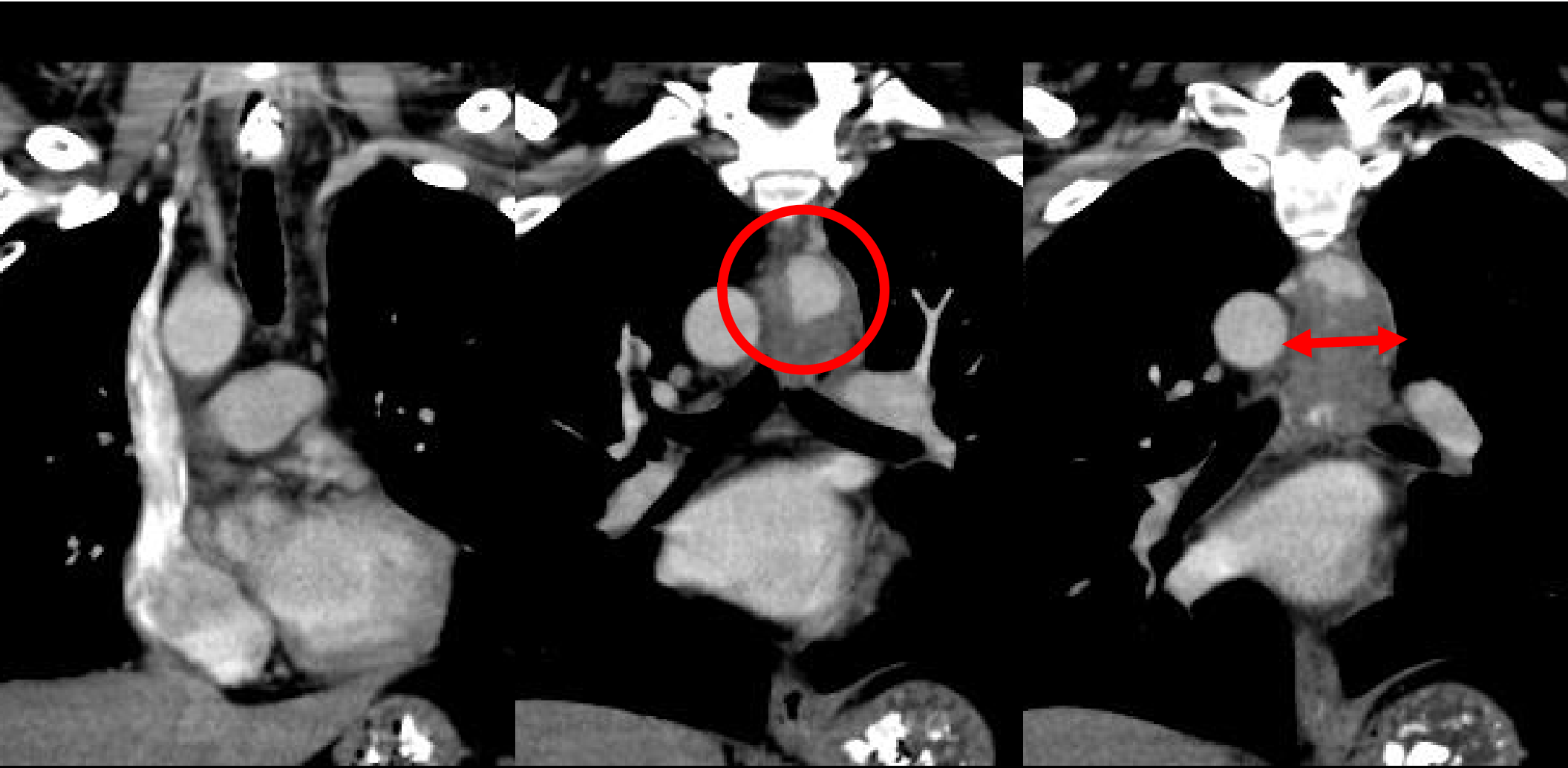
- Transferred emergently to our institution
- BP stabilized with a small dose of Ca^{2+} blocker before transfer
- Referred to IR at 4 am with “abnormal blood vessel in mediastinal mass – possibly bleeding”
- CT and history reviewed – patient still in quite considerable pain
- 5 Fr sheath placed in the right common femoral artery
- 5 Fr C2 catheter used to engage the abnormal vessel for diagnostic angiography



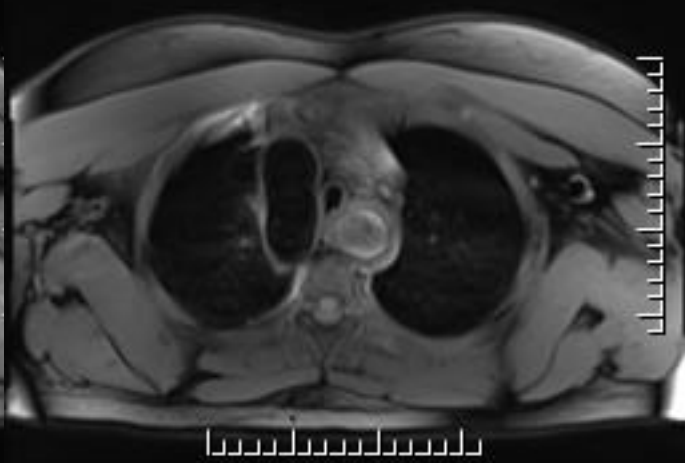
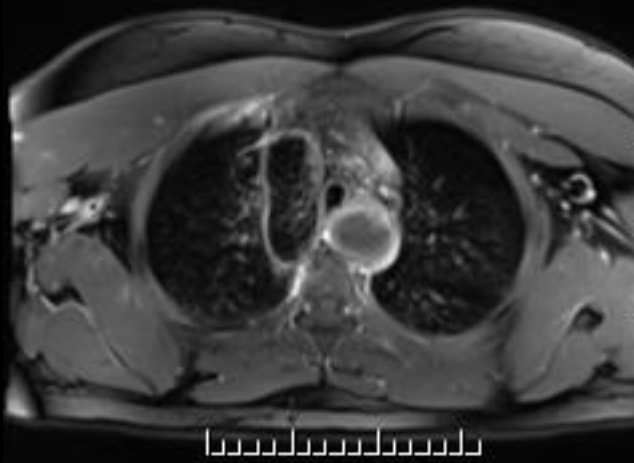
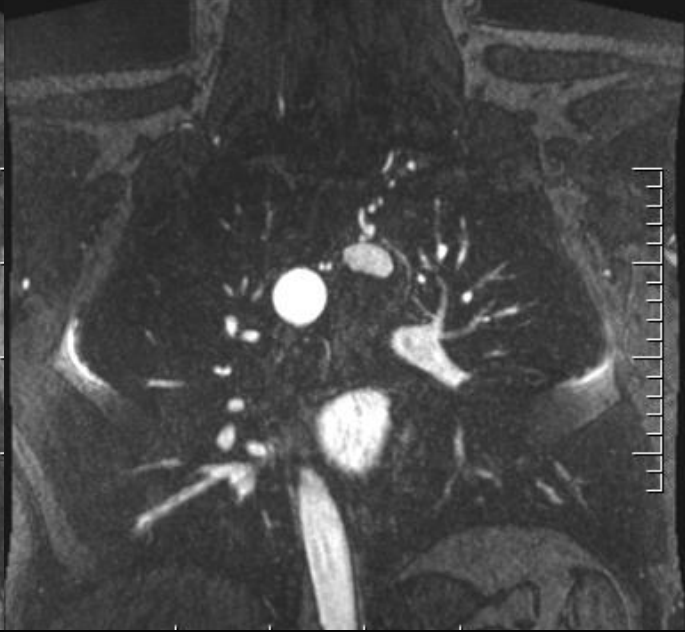
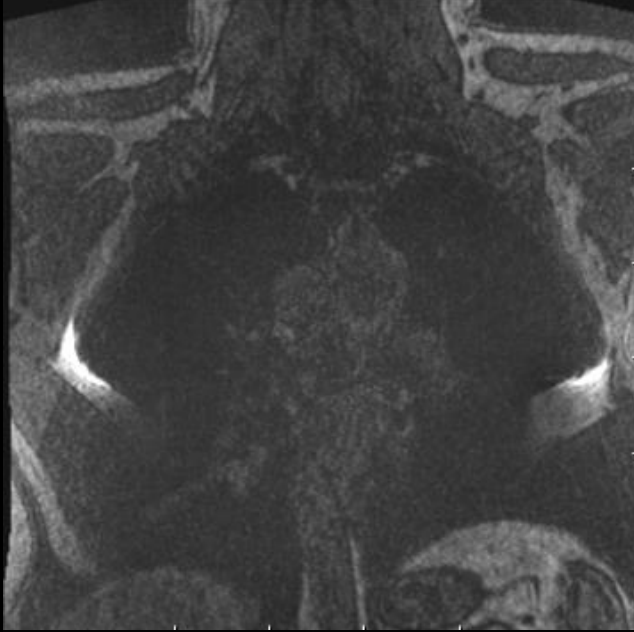
Case History



- Occluded left subclavian vein – looks chronic, with multiple collaterals
 - Hypertrophic and ectatic superior intercostal vessel with pseudoaneurysm, but no active extravasation at this time
 - Patient remained hemodynamically stable
 - Decision made to defer treatment until after further investigation of vascular anatomy and mediastinal mass
 - Patient admitted, appropriate analgesia prescribed
 - Started to complain of dysphagia
 - Barium swallow
 - Upper GI endoscopy
- Both unremarkable



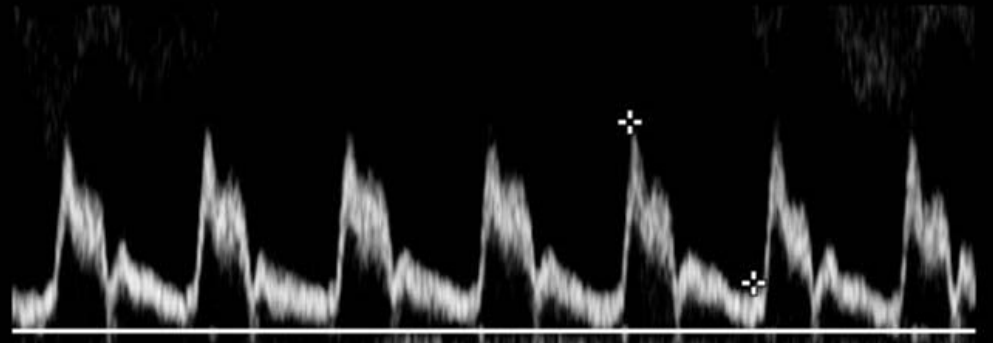
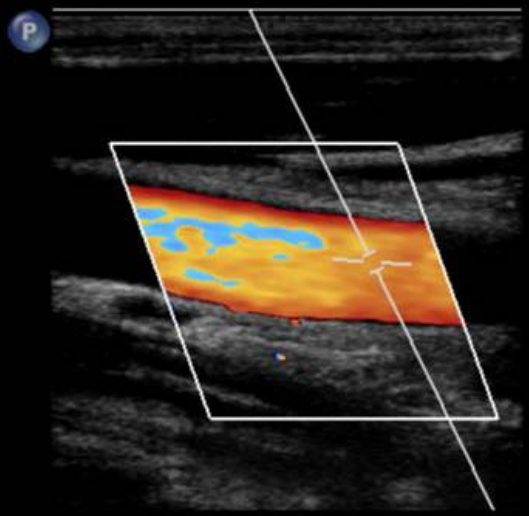
CT shows 2 cm pseudoaneurysm, resolving mediastinal hematoma



FR 19Hz 60°
R1

2D
51%
C 50
P Low
HGen

CF
72%
2500Hz
WF 162Hz
Low

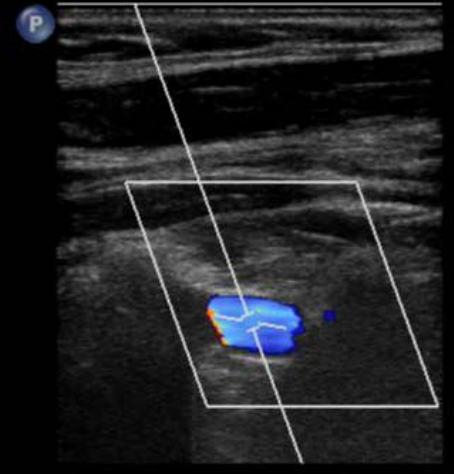


LT CCA PROX

FR 19Hz 60°
R1

2D
58%
C 50
P Low
HGen

CF
78%
2500Hz
WF 162Hz
Low



LT VERT A

US Doppler: retrograde flow in left vertebral artery

Case History



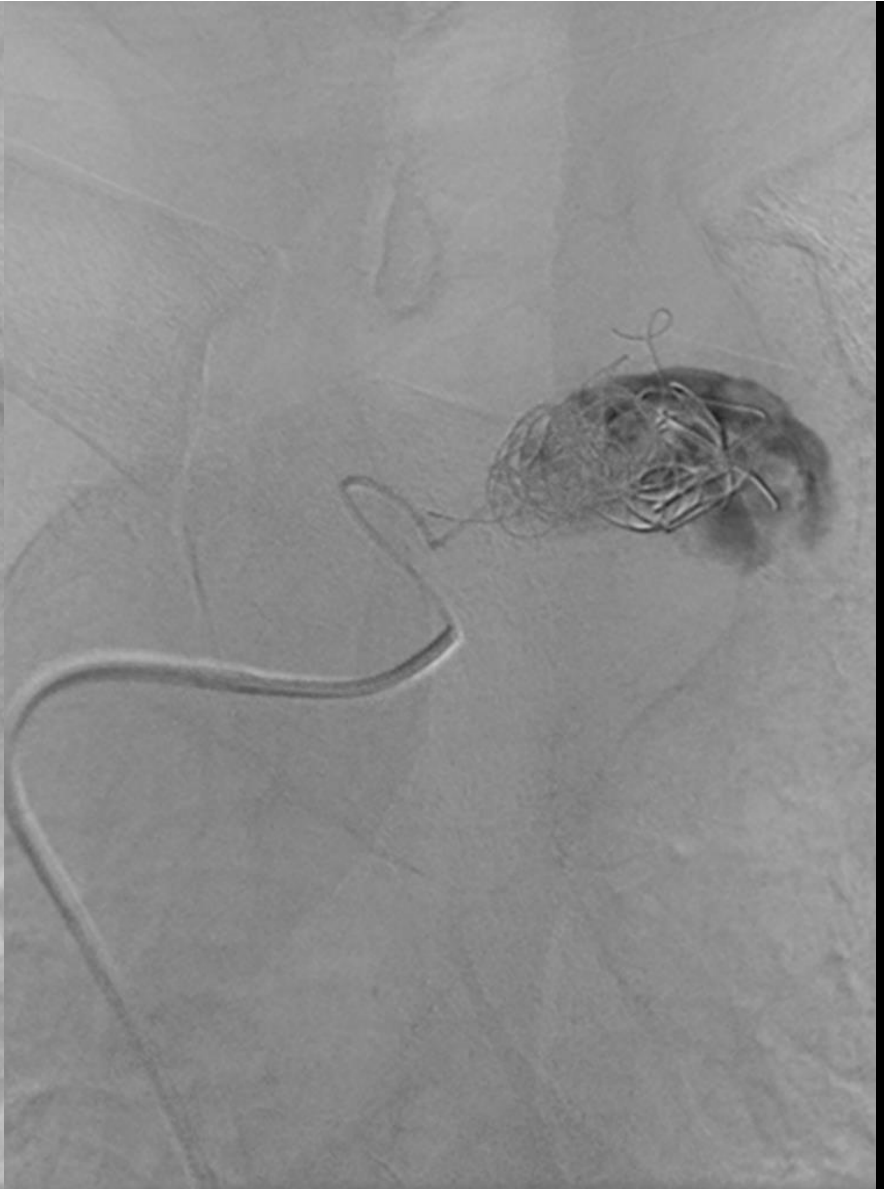
- All evidence points towards bleeding from pseudoaneurysm of abnormal left superior intercostal artery causing mediastinal hematoma
- Left subclavian artery chronically occluded
 - Left arm supplied by collaterals and retrograde flow in left vertebral artery
- No evidence of mediastinal malignancy or AVM
- Decision made to treat with embolization of pseudoaneurysm, with plan for L CCA – subclavian bypass if left arm showed signs of ischemia
- 5 Fr sheath, 5 Fr SIM-1 catheter + 2.4 Fr microcatheter to access pseudoaneurysm

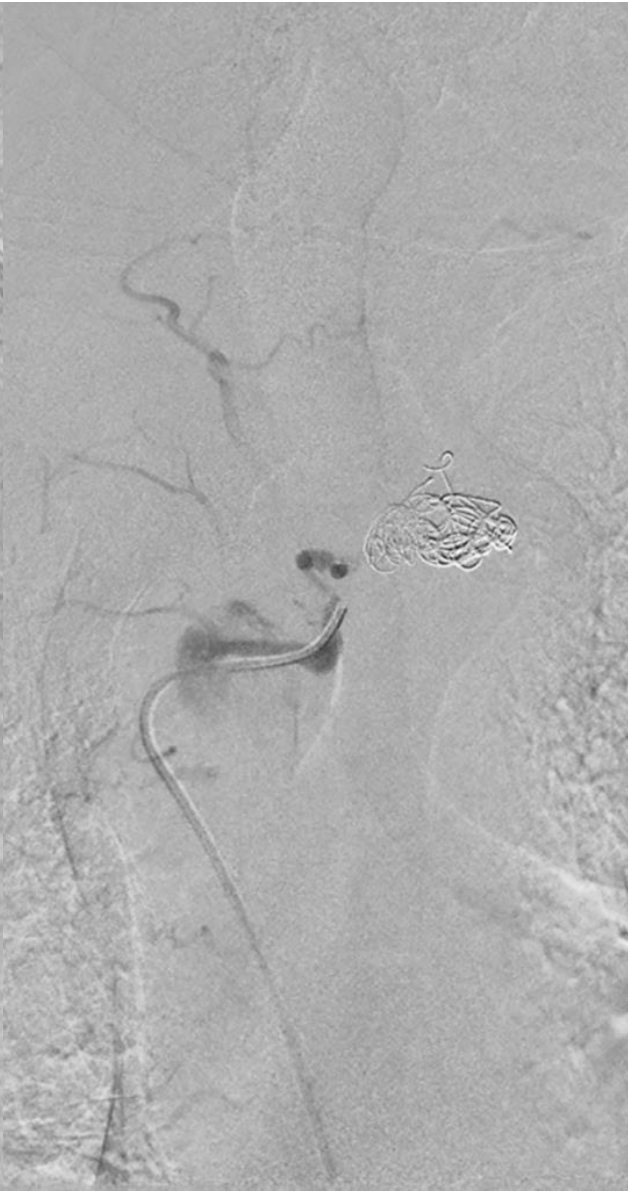


Endovascular Procedure



- Extremely difficult to cannulate pseudoaneurysm “back-door” from aortic side (Plan B to access L subclavian artery to coil the superior intercostal via a retrograde approach)
- Eventually managed to get tip of microcatheter out through the back-door
- Coiled from outflow artery, packing the sac with a variety of microcoils and laying the final coil out into the inflow artery
- Flow within sac ablated





Case History



- At four month follow-up:
 - Patient doing well
 - On direct questioning reports occasional pins and needles in left hand
 - Pseudoaneurysm sac and superior intercostal artery thrombosed
 - No indication for left subclavian artery revascularization

