



Rare presentation and management of a complex subclavian artery aneurysm

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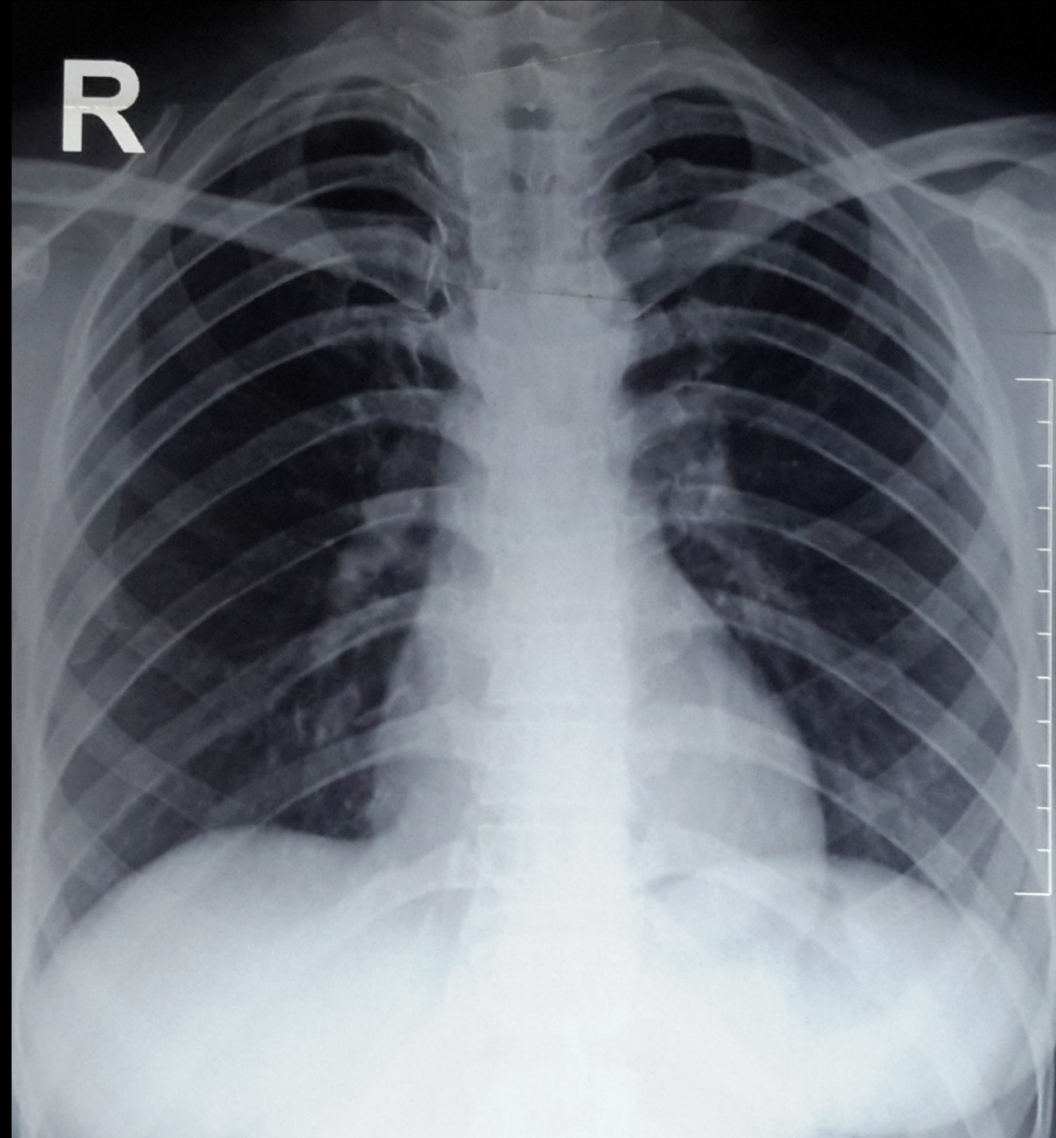
Department of Cardiology, Calicut Medical College

The patient...

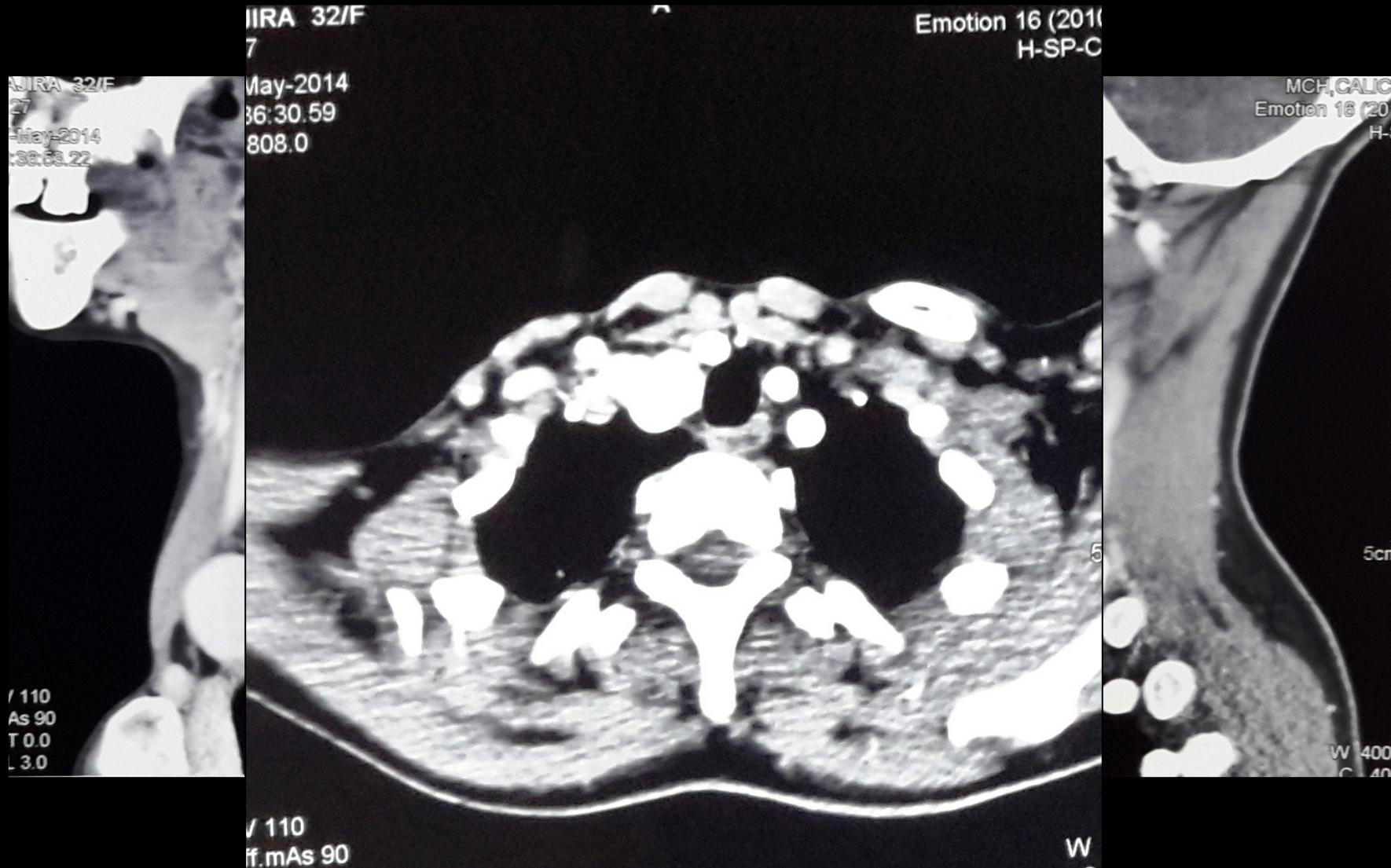
- 32 year old female, mother of two
- Dysphagia to solids- 2m
- Noticed swelling with discomfort in the neck
- No significant past medical history

- **Clinical examination:**
 - Pulsatile swelling in the root of right side of the neck
 - Bruit +
 - All peripheral pulses palpable
 - All systems –wnl
 - No fever

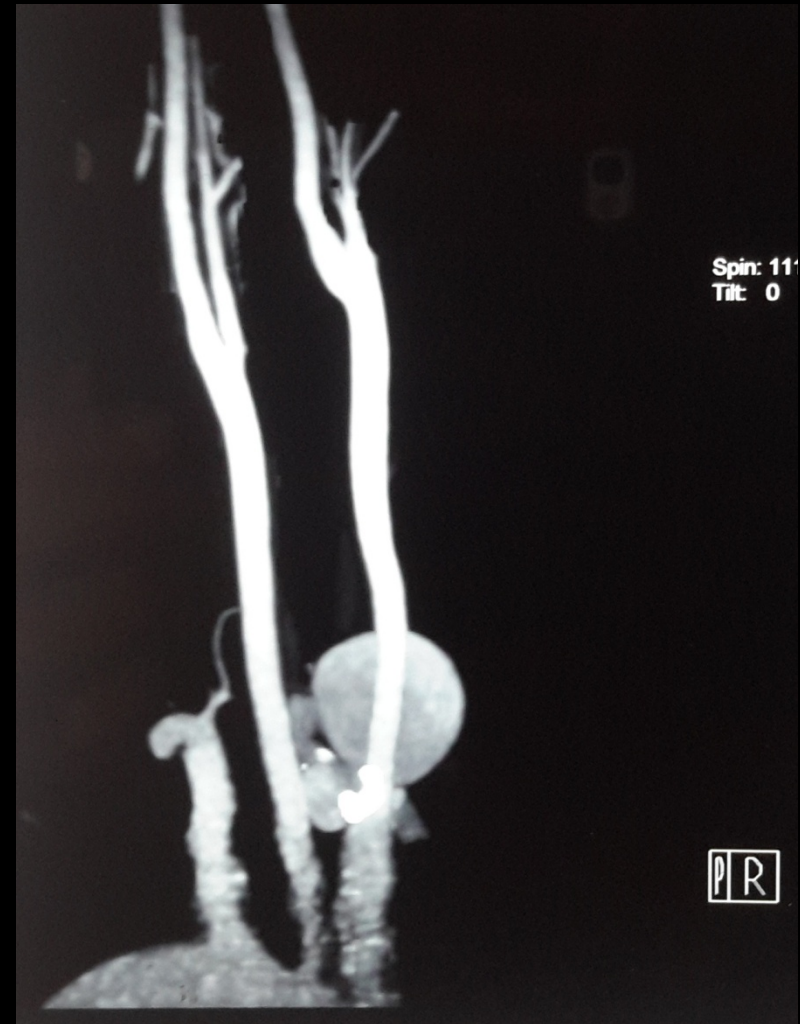
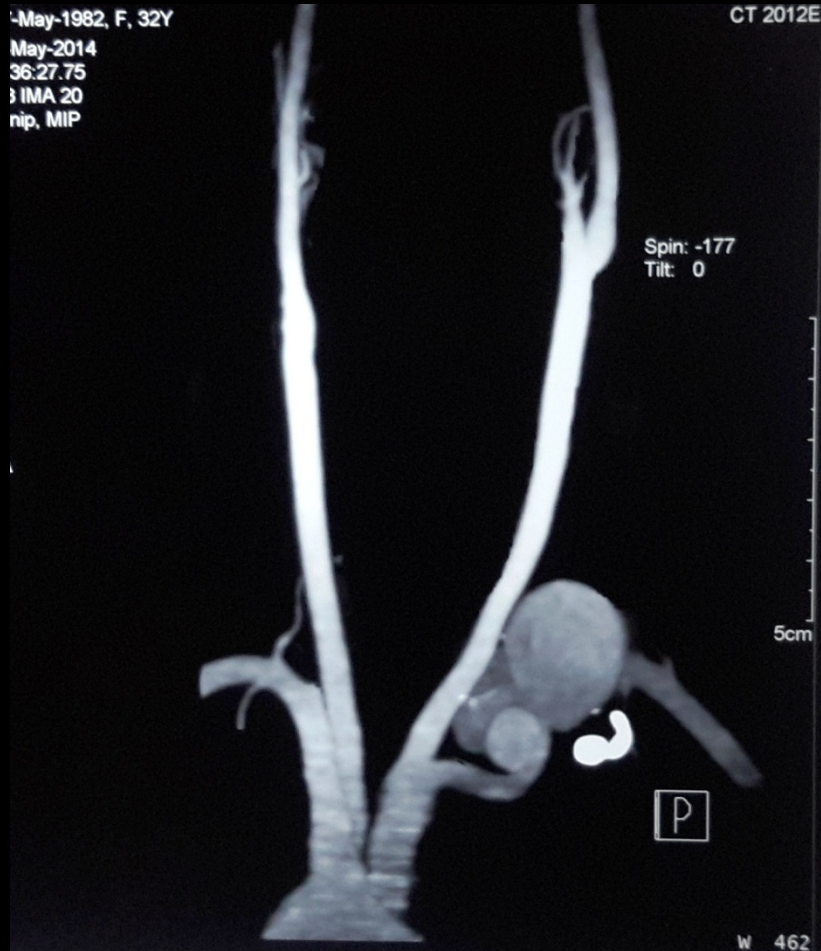
Chest Xray



MDCT angiogram

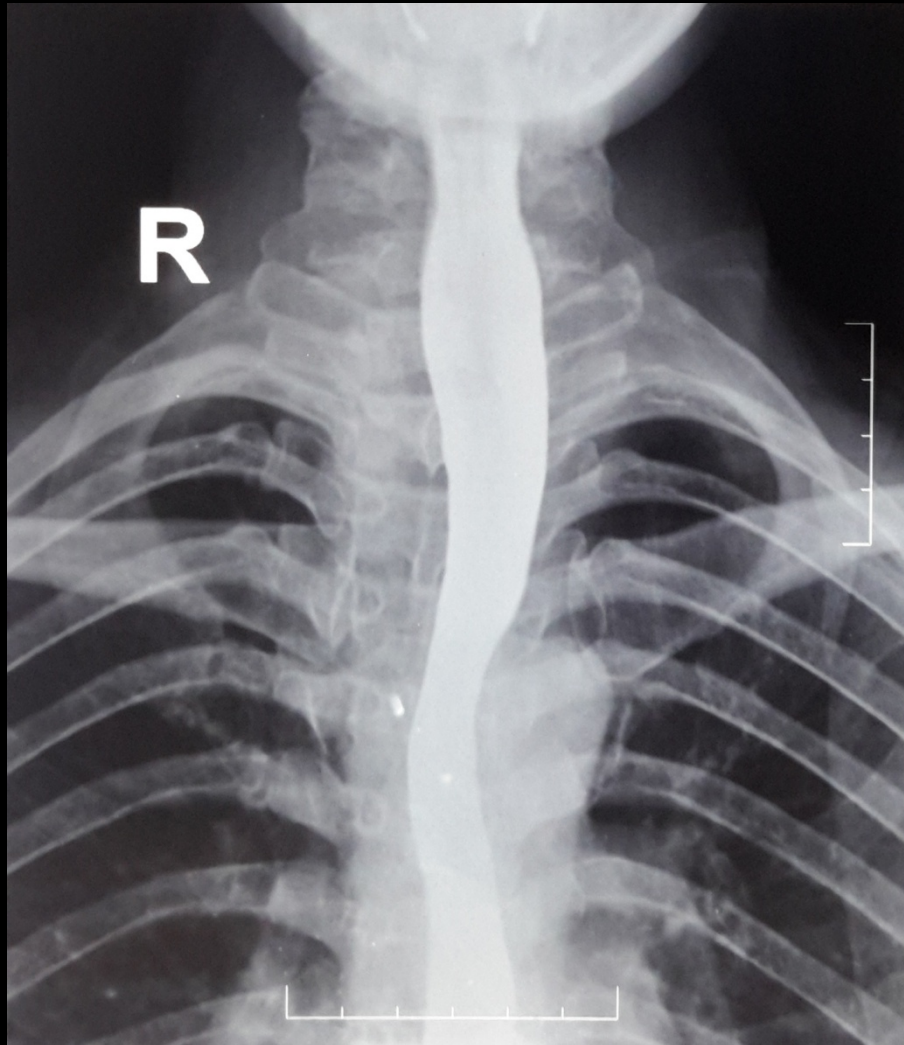


MDCT-angio reconstruction



- CBC- Normal
 - ESR, CRP- Normal
 - ANA, RF: -ve
 - HIV, HBsAg, HCV: -ve
 - VDRL: -ve
 - C-ANCA, p-ANCA : -ve
 - TFT: -ve
-
- OGD scopy: Normal
 - Echocardiography: Normal study
 - Coronary angiogram: Normal
 - CECT chest(16 slice CT): No additional vascular abnormalities

Barium swallow



Selective right innominate DSA



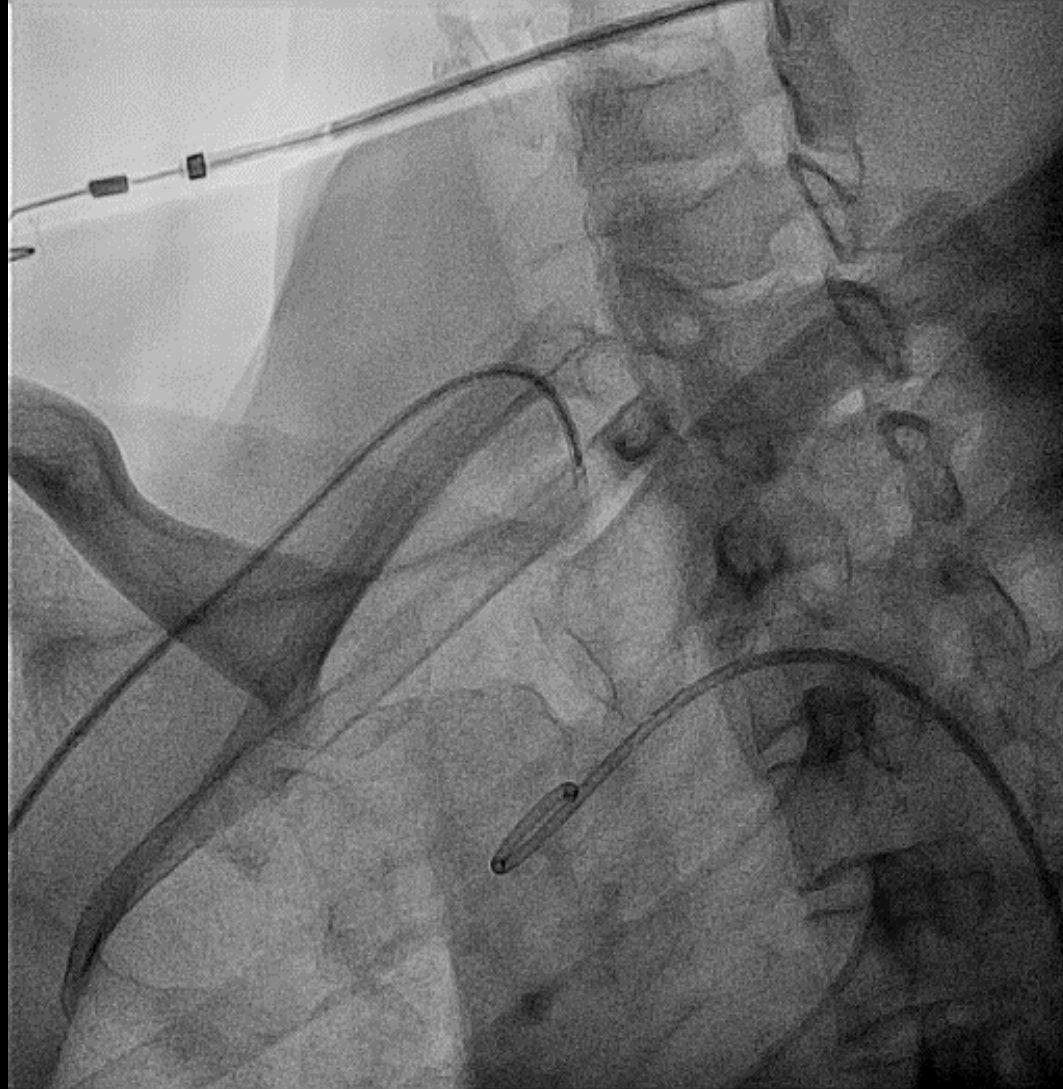
Diagnosis: **Idiopathic right subclavian artery complex aneurysm with compressive symptoms.**

Options: Surgical correction vs
Endovascular stent-graft

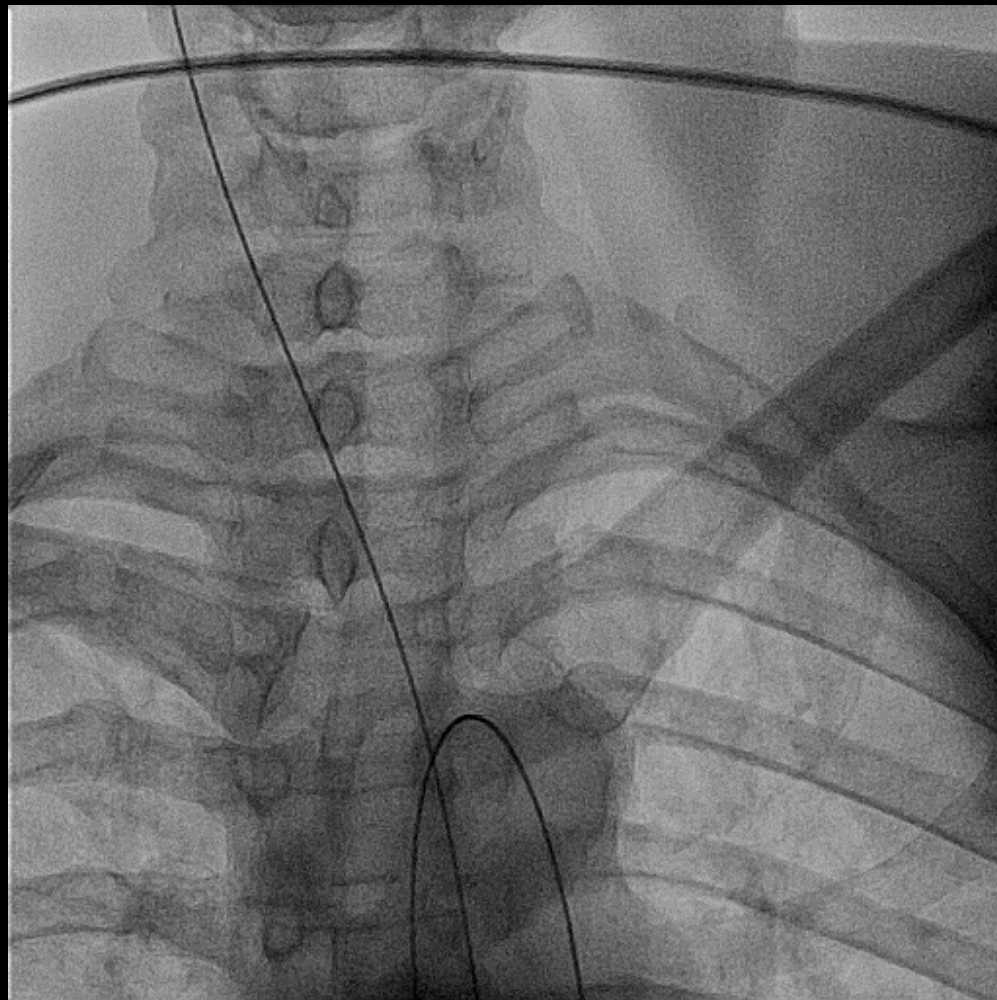
- After few weeks she presented with pain, visible enlargement in root of neck.

→ **Admitted and urgently arranged *Bard Fluency vascular stent-grafts***

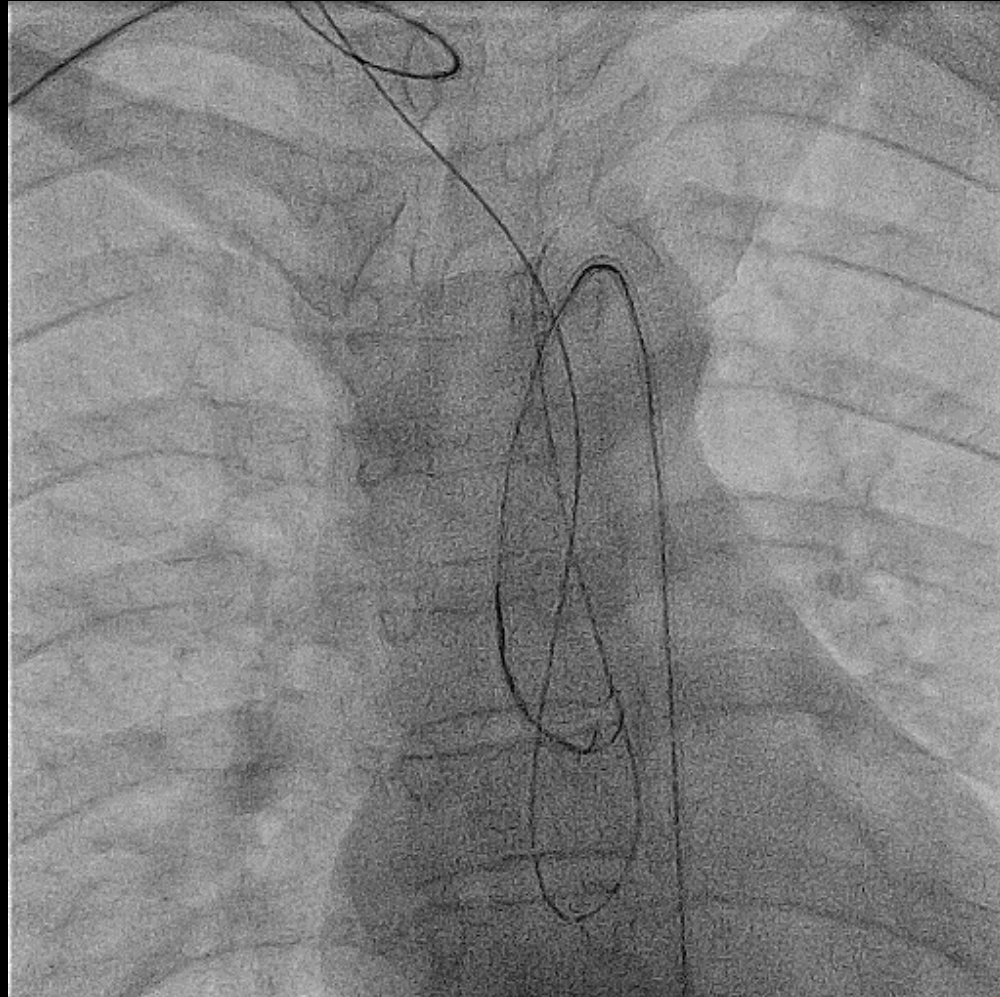
Right radial and right femoral access



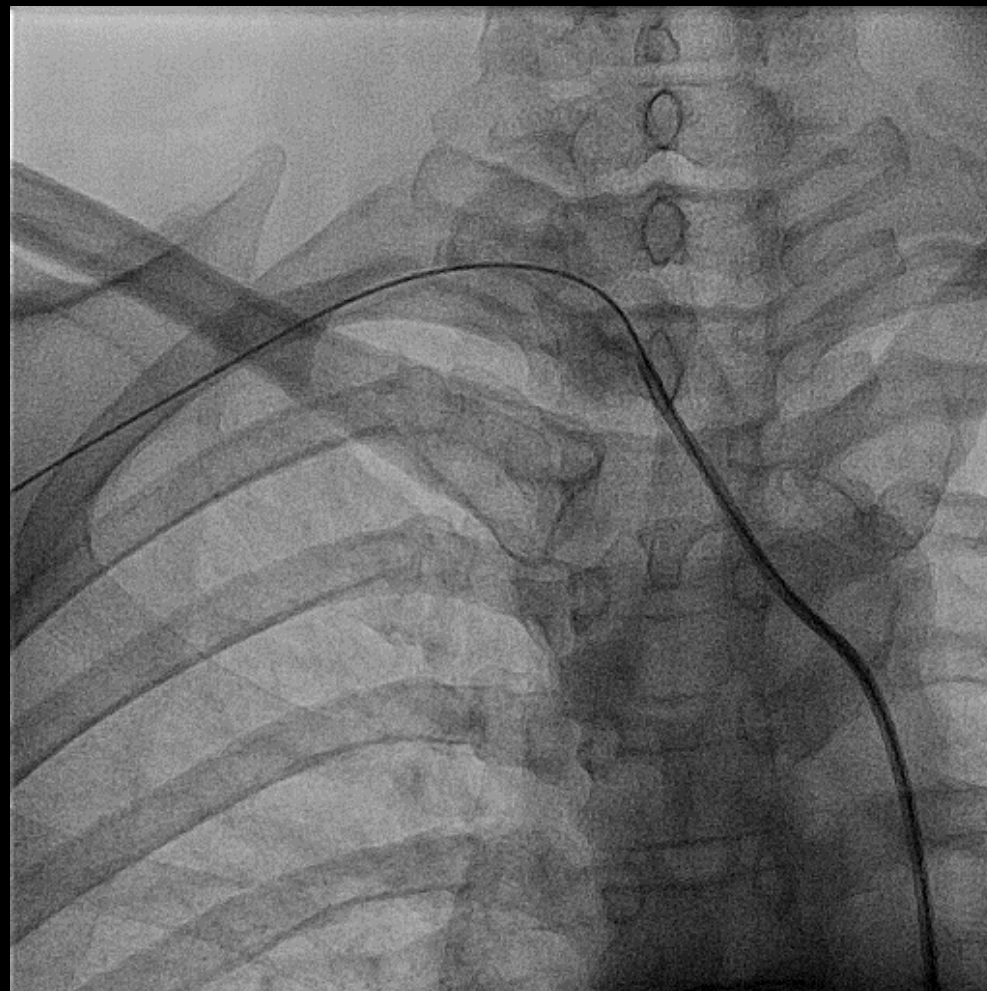
Attempting to pass Terumo wire across the aneurysm



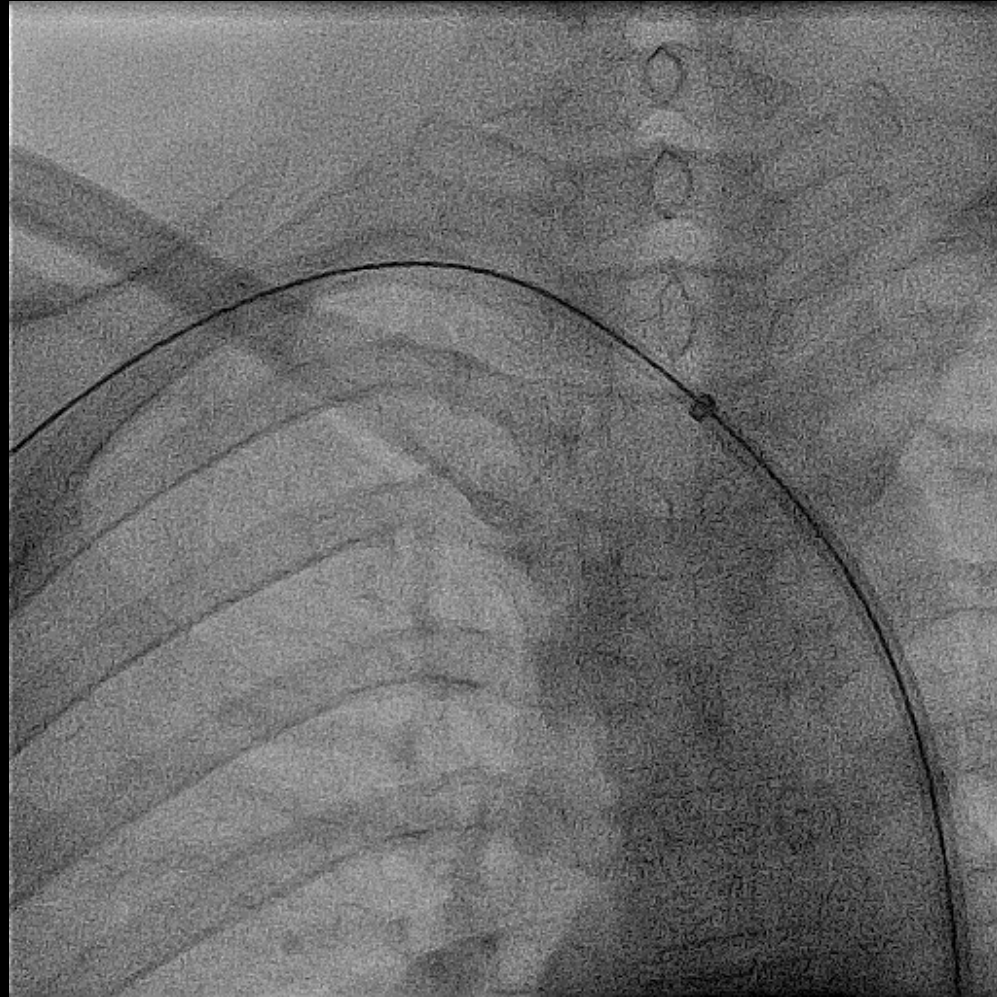
Terumo wire successfully crossed with JR support from above and snared from below



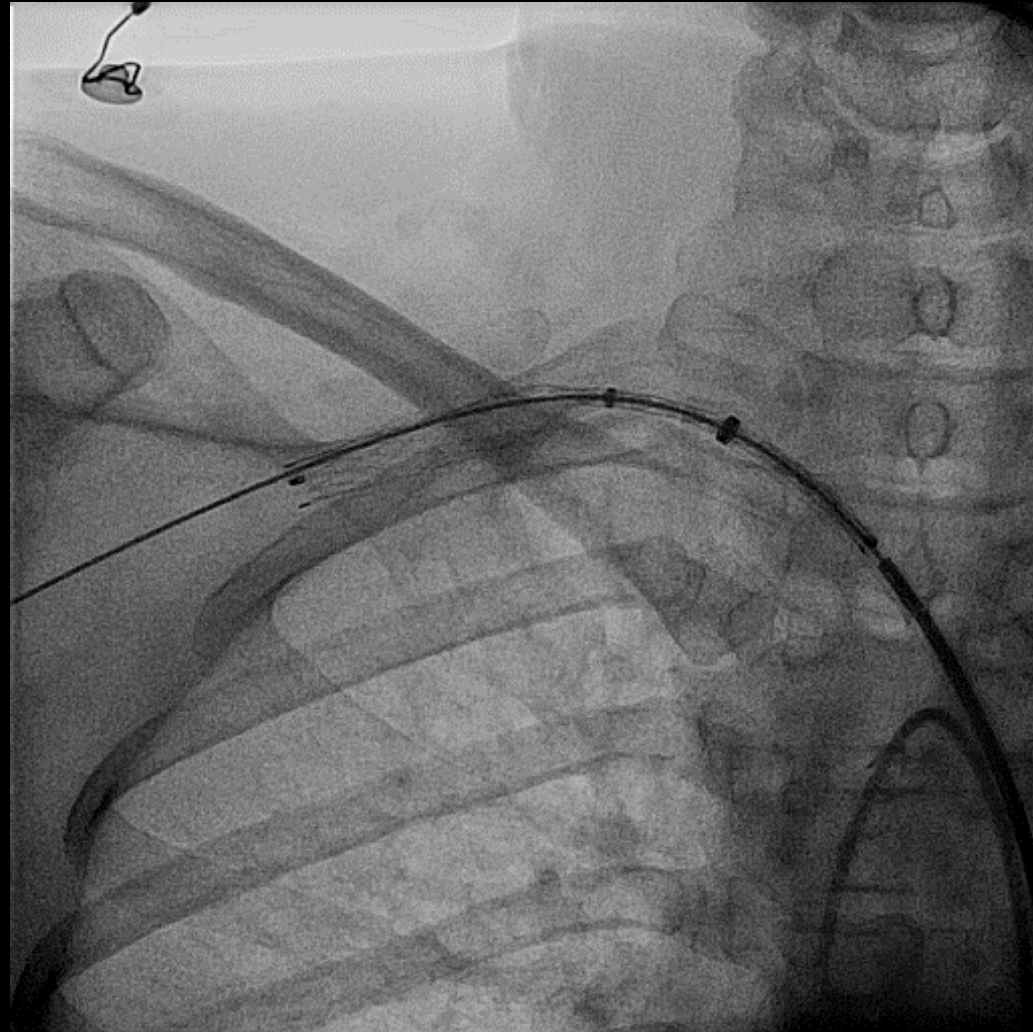
Attempting to track catheter across the aneurysm



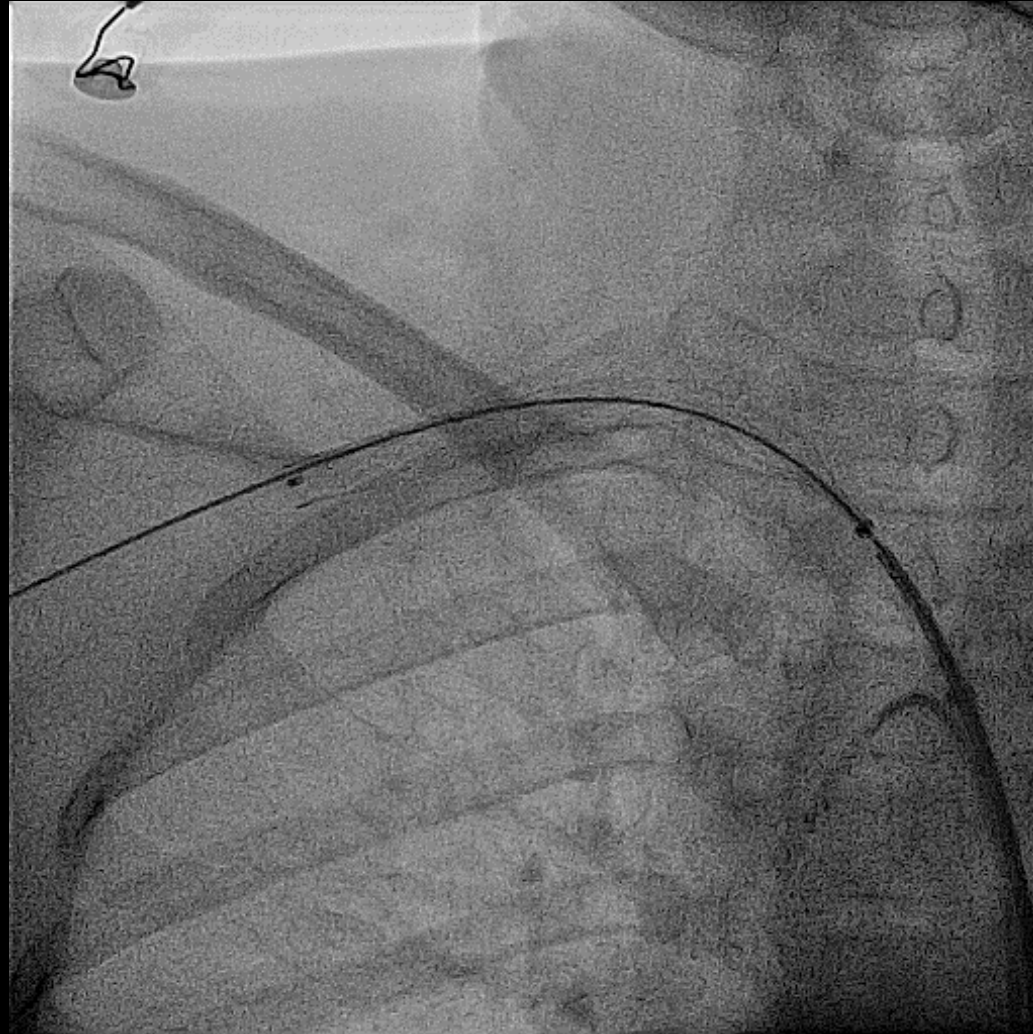
Exchanged with Amplatzer wire and 10F ASD sheath inserted



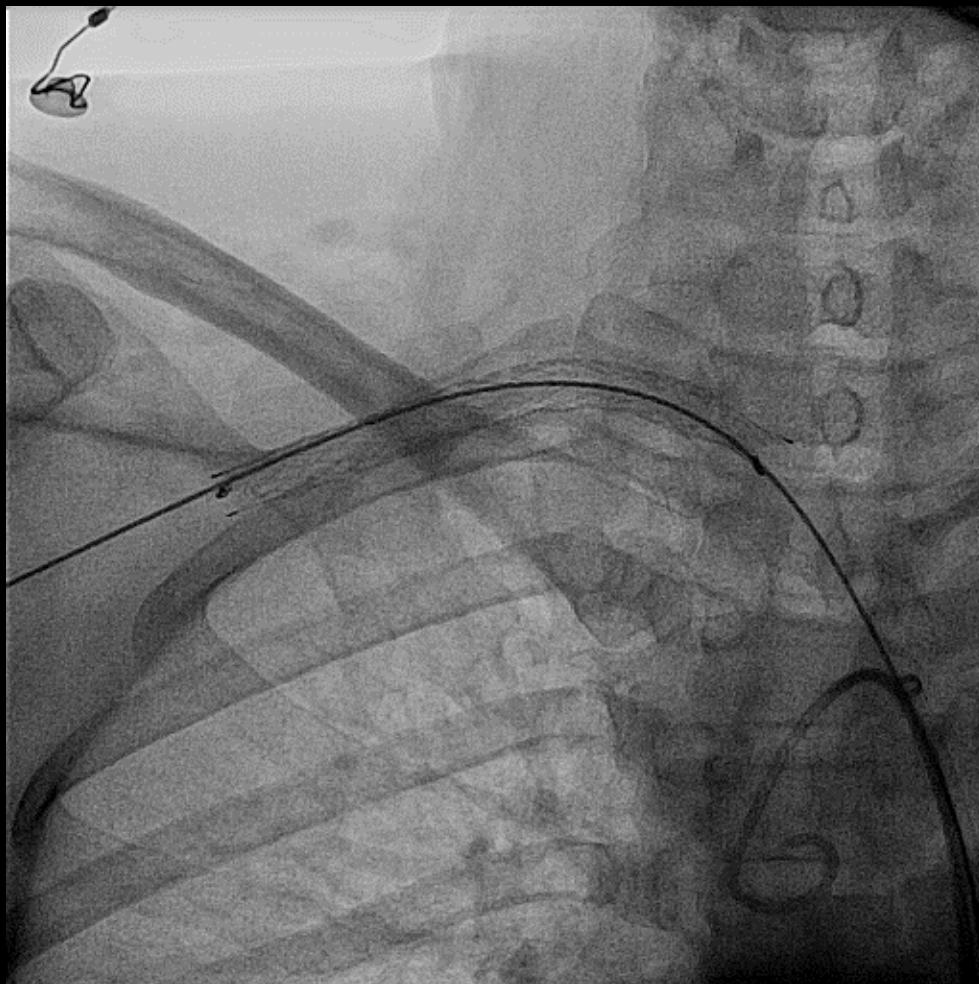
Deployment of 1st stent
(10 * 80mm 9F Fluency stent graft)



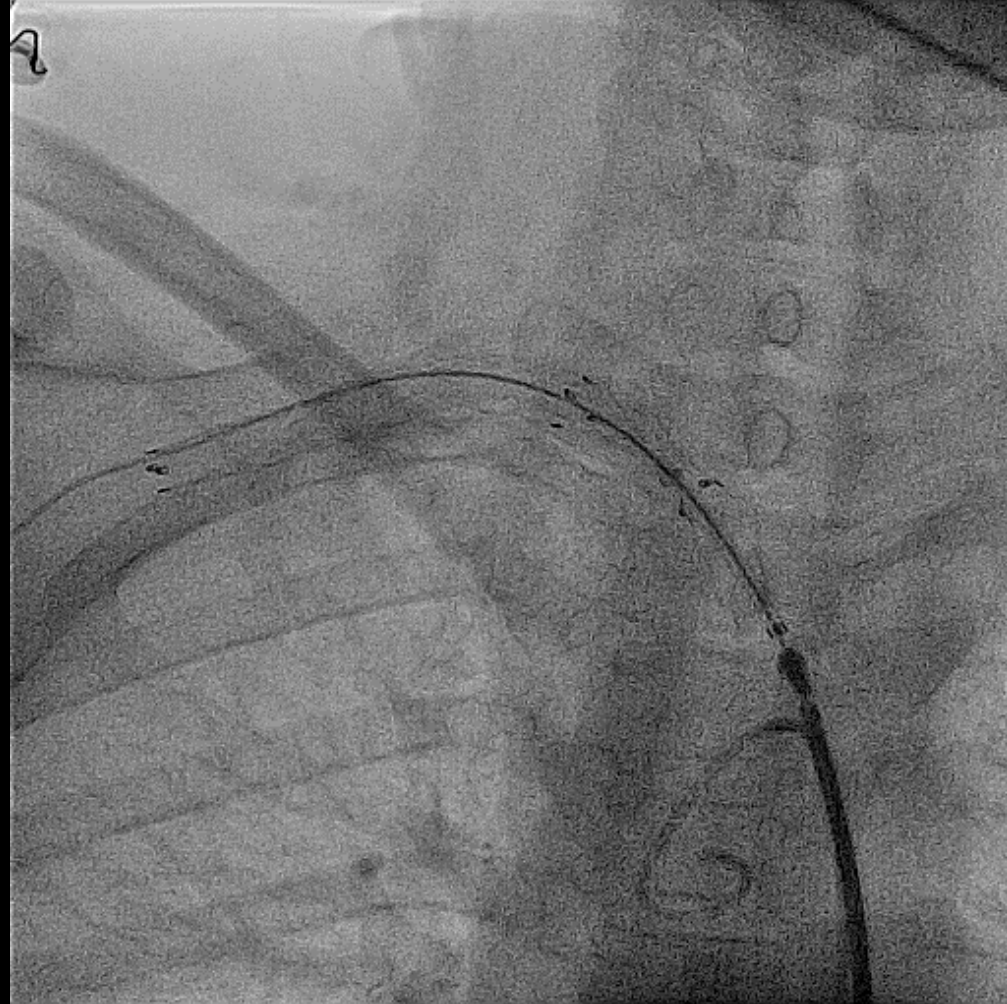
Undeployed proximal stent - ? Tight stenosis



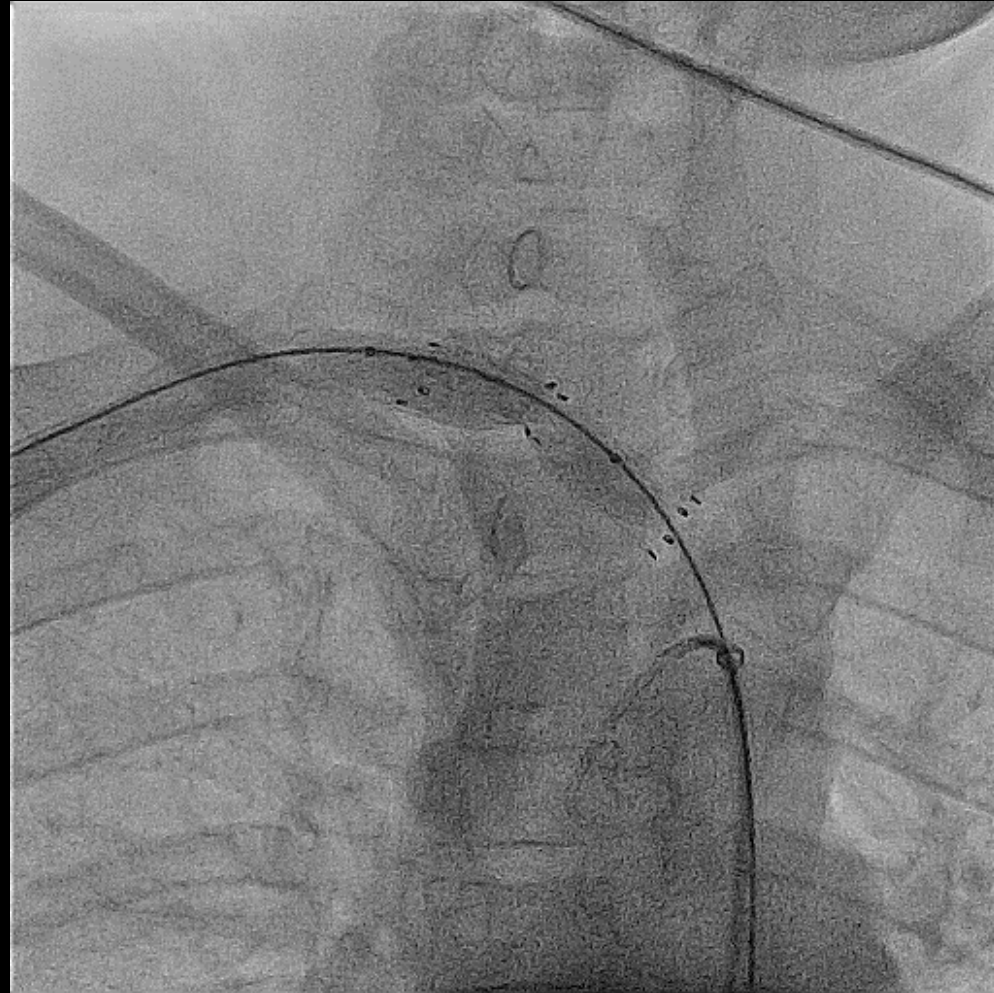
Stent displaced into the aneurysm



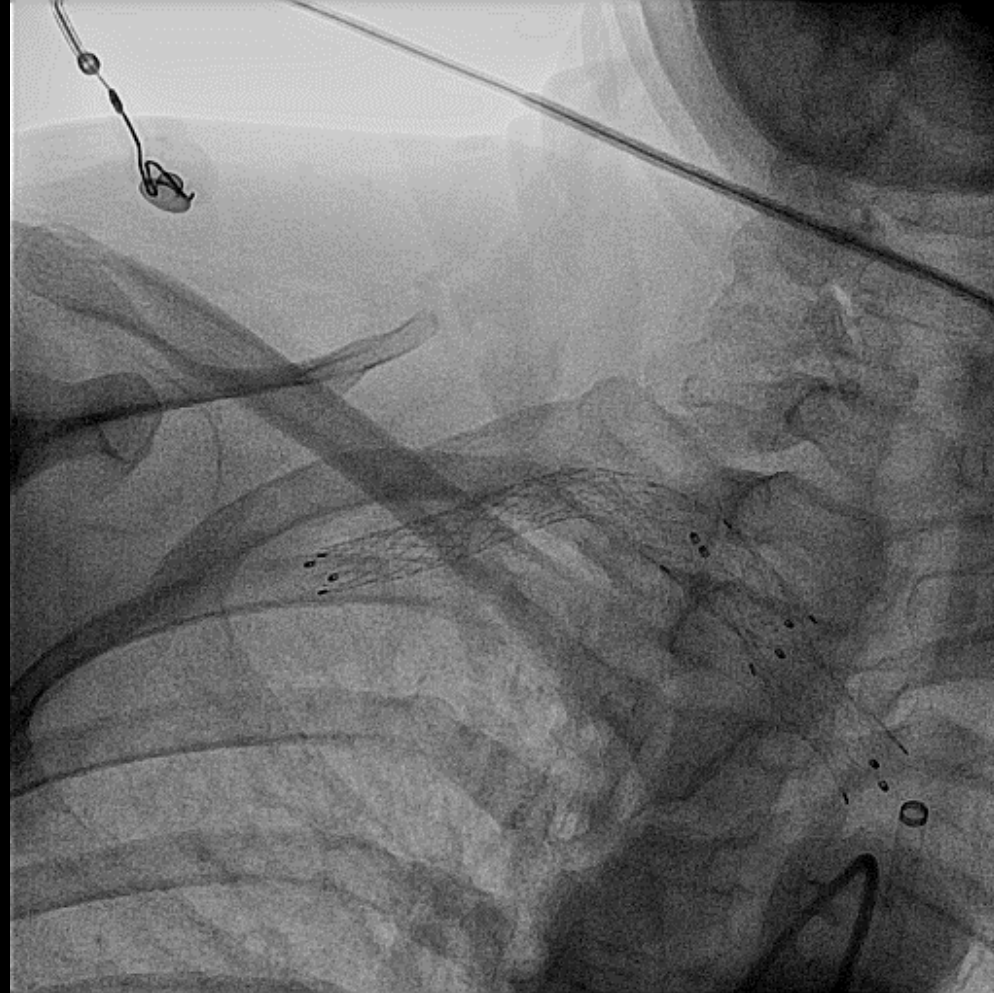
Deployment of 2nd stent
(12 * 40mm 10F Fluency plus)



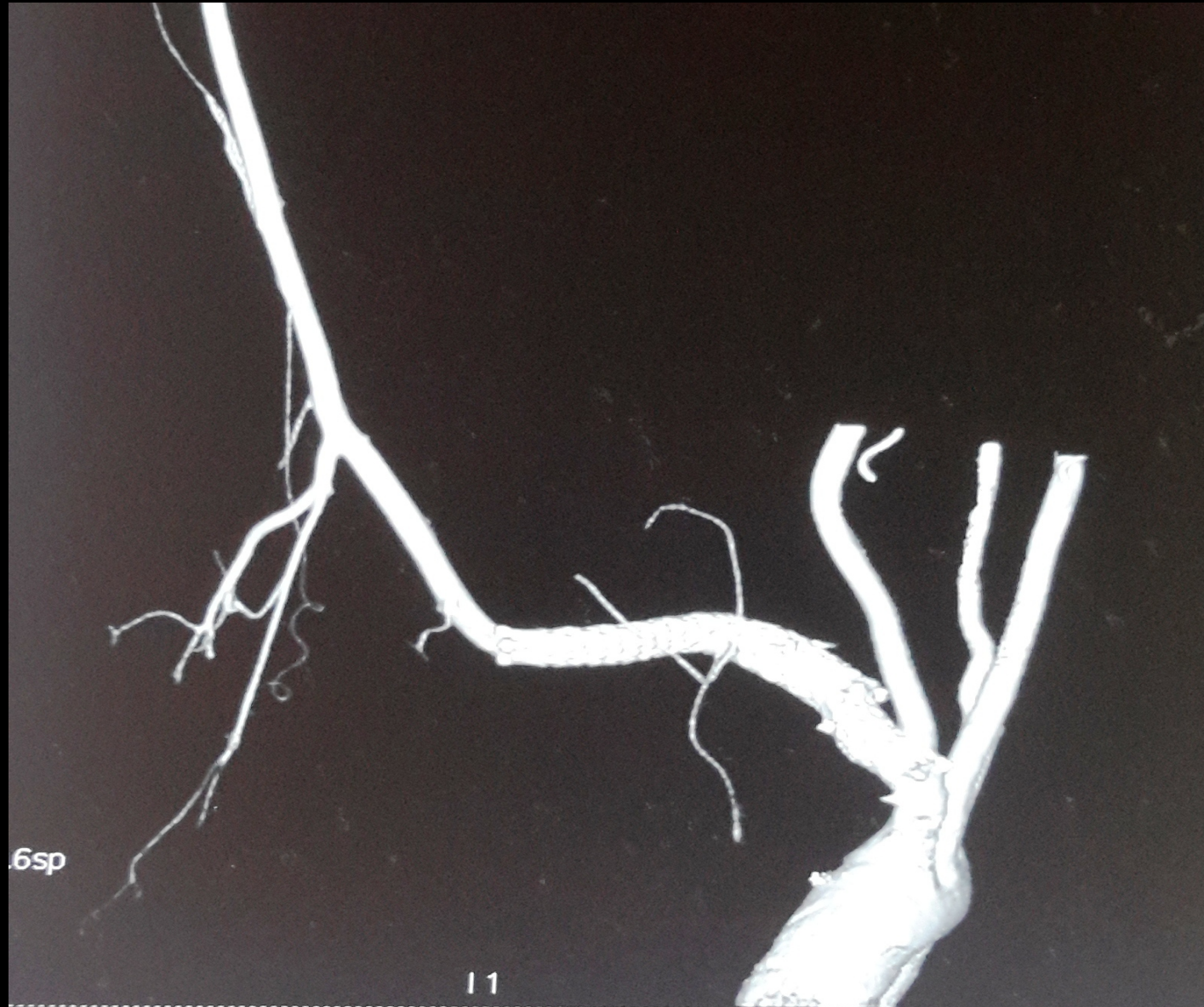
Dumbbell shaped stent- stenosis at aneurysm mouth



Final injection



Post procedure imaging



1 year Follow up

- No swallowing difficulty
- Asymptomatic,

- No bruit/ swelling
- All pulses palpable

Literature Review

- **Epidemiology:** 0.13% of all aneurysms.
- **Aetiology:** Atherosclerosis(60%), trauma, infections(TB, syphilis, bacterial), vasculitis, CTDs, thoracic outlet obstruction, Marfans syndrome, collagen vascular diseases, aberrant SCA, congenital.
- **Common Presentations:** Pulsatile lump, brachial plexus compression, upper limb ischemia, incidental mediastinal widening, hemoptysis(erosion of lung apex), hoarseness of voice
- **Rare presentations:** Dyspnoea, dysphagia, Horner's syndrome

1. *Dent et al. Atherosclerotic arterial aneurysms: Arch Surg 1972.*

2. *Dougherty et al. Atherosclerotic aneurysm of the intrathoracic subclavian artery: a case report and review of literature. J Vasc Surg 1995*

Investigations

- Vasculitis: PAN, Takayasu arteritis
- CTDs-SLA, RA, Ankylosing spondylitis
- Infection: TB, HIV, HCV, HBsAg, Syphilis
- ACVD
- USG-Doppler
- **CTA is investigation of choice for anatomy delineation**

Treatment

- Surgical: Ligation, Arteriorrhaphy, grafting
- Endovascular stent-grafting (multiple case reports)

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Images in cardiovascular medicine

A rare presentation of idiopathic right subclavian artery aneurysm successfully tackled by endovascular stent-grafting

[Sandeep Mohanan, Rakesh Jain, M N Krishnan, Vinayakumar Desabandhu](#)

THANK YOU



