



CASE REPORT

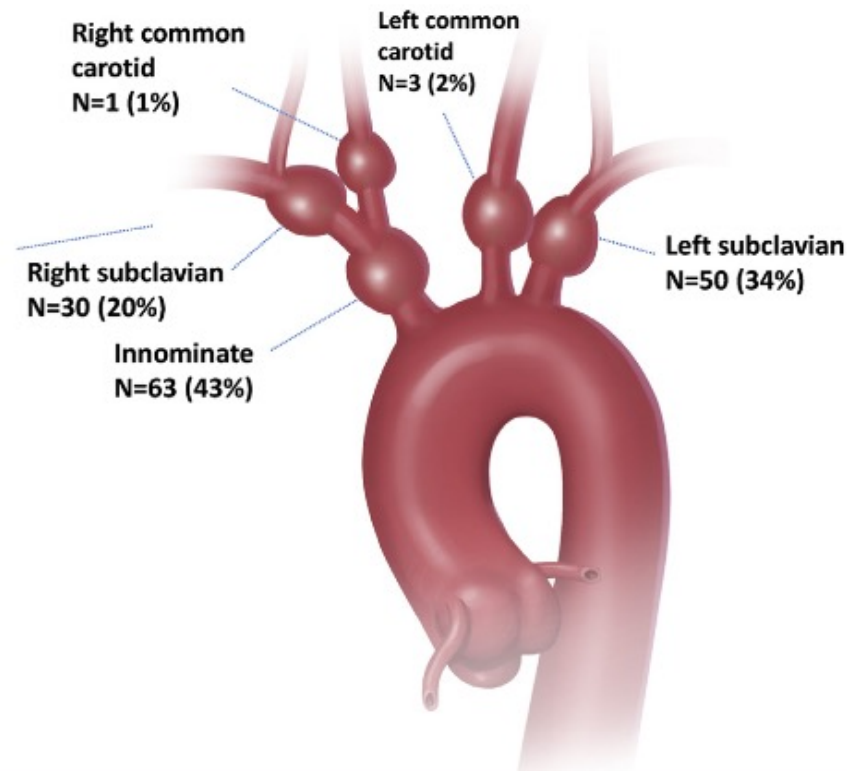
RUPTURE OF BRACHIOCEPHALIC ANEURYSM


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INTRODUCTION

Aneurysm of arteries branching from the aortic arch is an uncommon condition






Cause

Atherosclerotic	47 (63)
Iatrogenic	18 (24)
Ehlers-Danlos	2 (3)
Mycotic	1 (1)
Traumatic	6 (8)

Symptoms

Asymptomatic	52 (70)
Dysphagia	2 (3)
Hoarseness	2 (3)
TIA	9 (12)
Arm claudication	9 (12)



Rupture of the aneurysm into the lung, pleural space, esophagus and the trachea

→ **Hemorrhage shock and death**

Cury M, et al. Supra-aortic vessels aneurysms: diagnosis and prompt intervention. J Vasc Surg. 2009 Jan;49(1):4-10. doi: 10.1016/j.jvs.2008.08.088. PMID: 19174249.

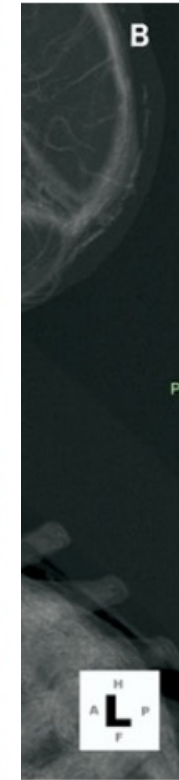
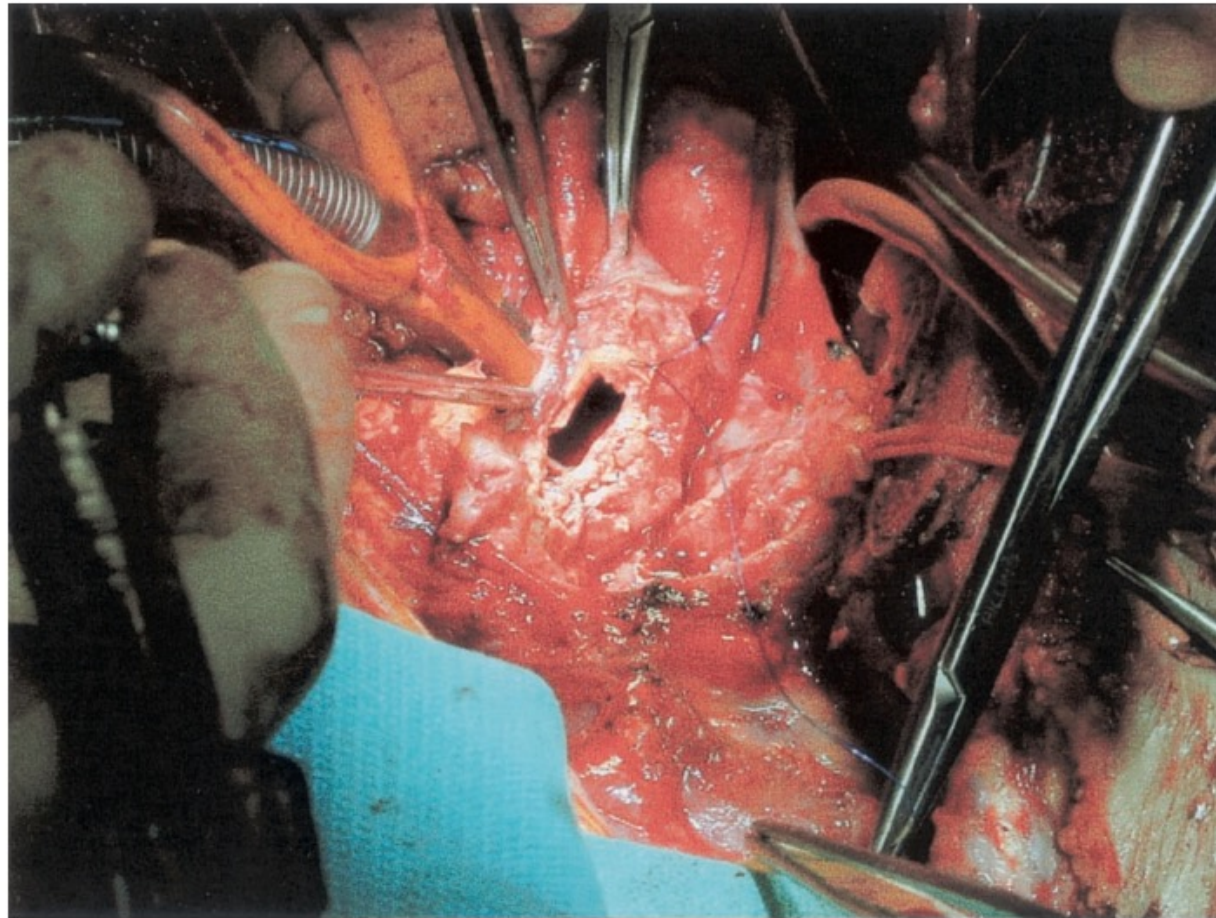


Fig 3. A aneurysm (an

aneurysm (an **Fig 3.** Intraoperative photo shows defect in aorta at takeoff of brachiocephalic artery after removal of infected pseudoaneurysm and stent.

common carotid





CASE REPORT

- 69-year-old, male
- Chief complaint: fever, right chest pain.
- PMH: Tuberculosis, hypertension
- Vital Sign:
 - Pulse: 110 bpm
 - RR: 20 bpm
 - BP (R): 100/ 70 mmHg (L): 110/70 mmHg
 - T°C: 37,5 -38,5



Laboratory test:

Blood test	Result	Reference
WBC	11	4-11
Neutrophil (%)	97	40-70
RBC	4,1	4,5- 6,5
Hematocrid	15,5	13-18
Urea	10	8-24
Creatinin	0,8	0,7-1,3
Glucose	5,4	4-7,8
CRP	254	< 5
All blood and sputum culture	NEGATIVE	
AFB	NEGATIVE	



Chest contrast- Computed tomography images.

- A. The frontal plane shows an aneurysm originating at the brachiocephalic artery where it separated to subclavian artery.
- B. The horizontal plane shows the trachea compressed by the aneurysm.





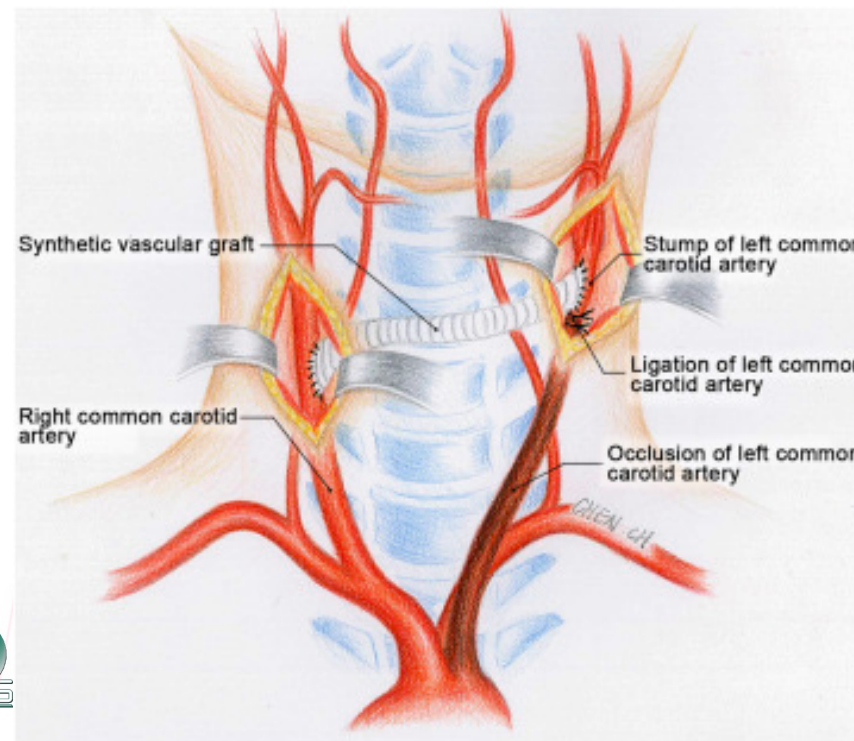
Dx: Mycotic Aneurysm of brachiocephalic artery

- Patient was suffering from persistent fever, right side chest pain, hoarseness, hemoptysis approximately 30ml of bright red blood every day.
- **TREATMENT:**
 - Meropenem and Linezolid + sBP < 120mmHg.
 - Consultation with Tuberculosis Department resulted in performing a bronchoscopy → AFB test was negative.



EMERGENCY SURGERY

- Hybrid: Left to right carotid- carotid bypass and ligate right common carotid artery + Stentgraft of brachiocephalic Artery

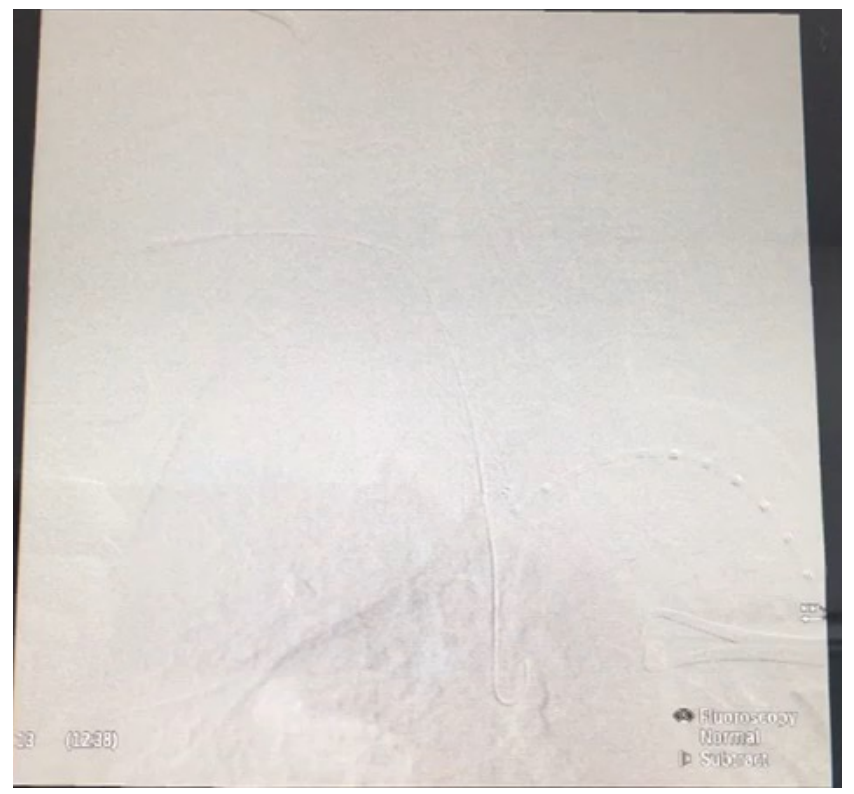




Before stentgraft



After stentgraft



RECOVERY


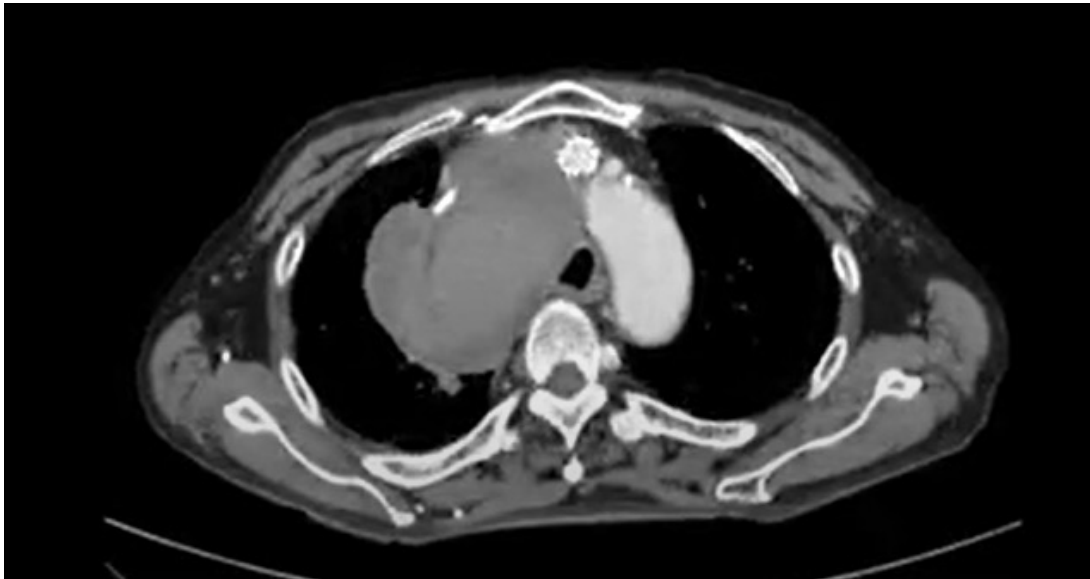
- The patient was extubated right after the surgery, and he relieved all the symptoms
- Two weeks after the discharge, sputum changed from black blood to rusty
- All sputum cultures: negative
- Antibiotics: 1 month after discharge.



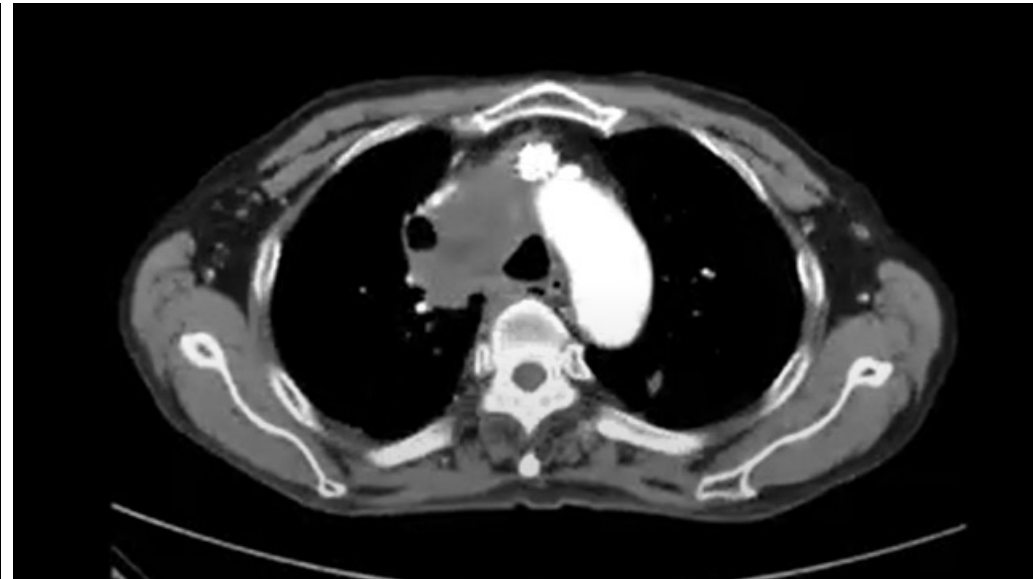


Ct scan changes

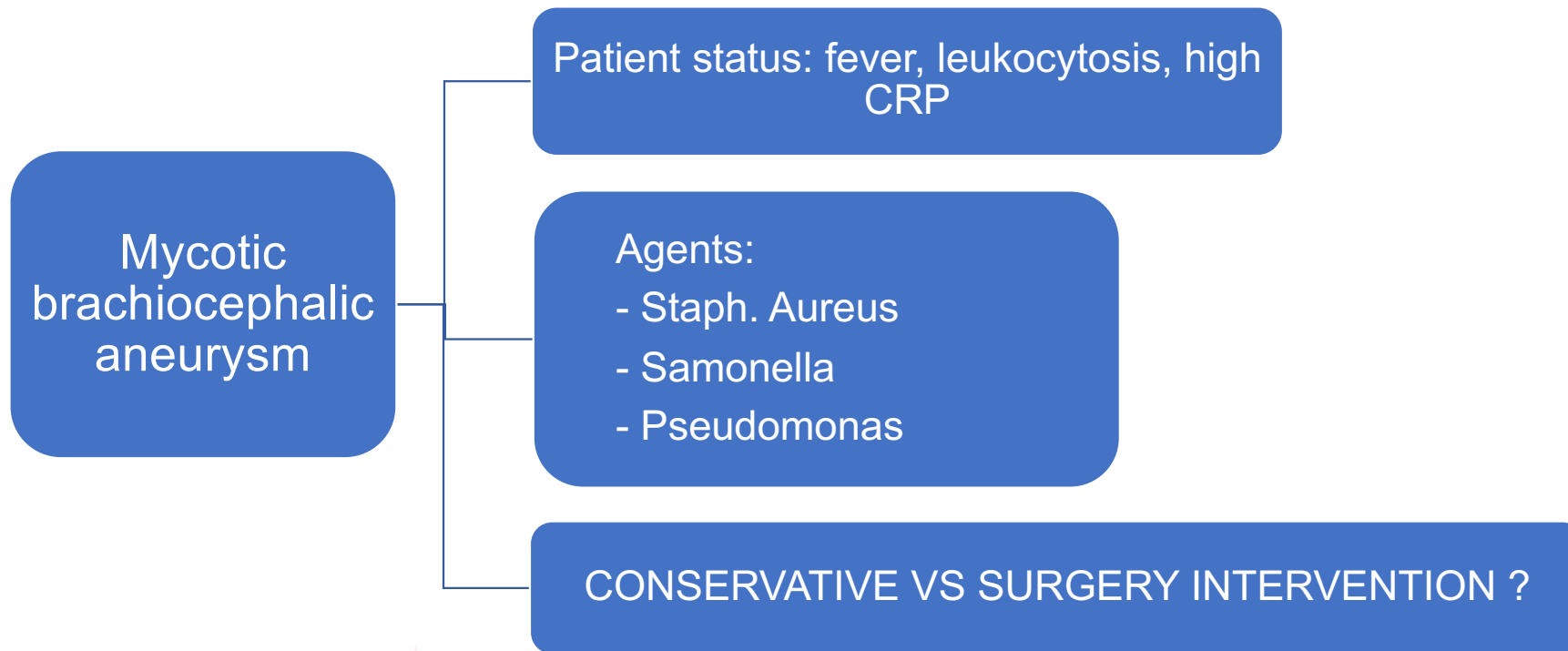
11/10/2021



09/12/2021



DISCUSSION





Decision making: Conservative vs surgery intervention

- **Threatening condition:**

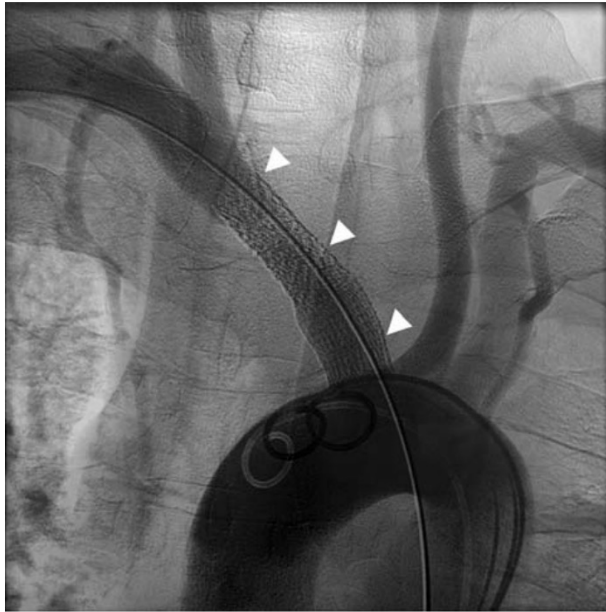
- Chest pain ↑
- Dyspnea ↑
- Superior VC compression (face, neck swelling; blueish skin; hemoptysis)
- Hoarse voice

- **Signs of rupture**

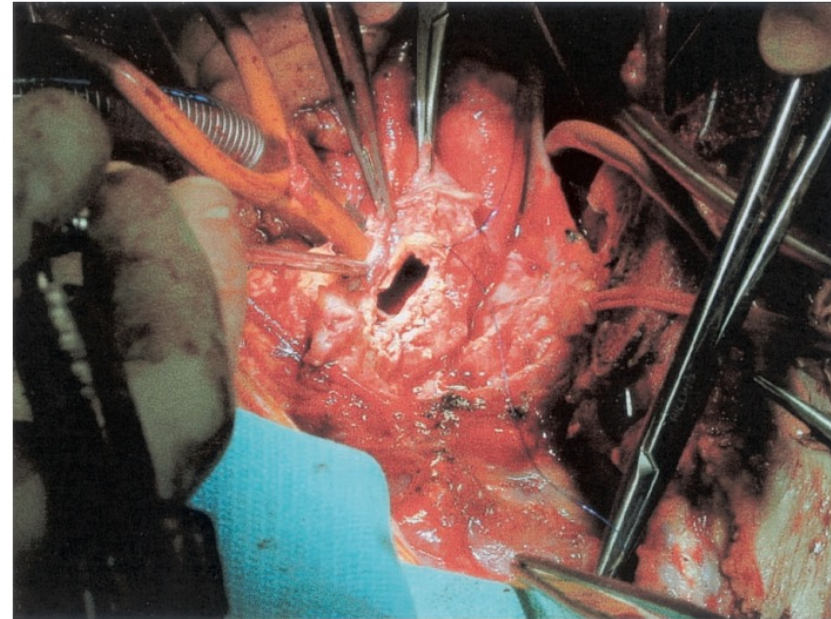
- Massive hemoptysis
- Emesis (vomit of blood)
- Hemothorax
- Low blood pressure



Open Surgery vs Endovascular intervention



Local sedation
Non- invasive
Disadvantage: Can not remove debris,
thrombose → stentgraft infection

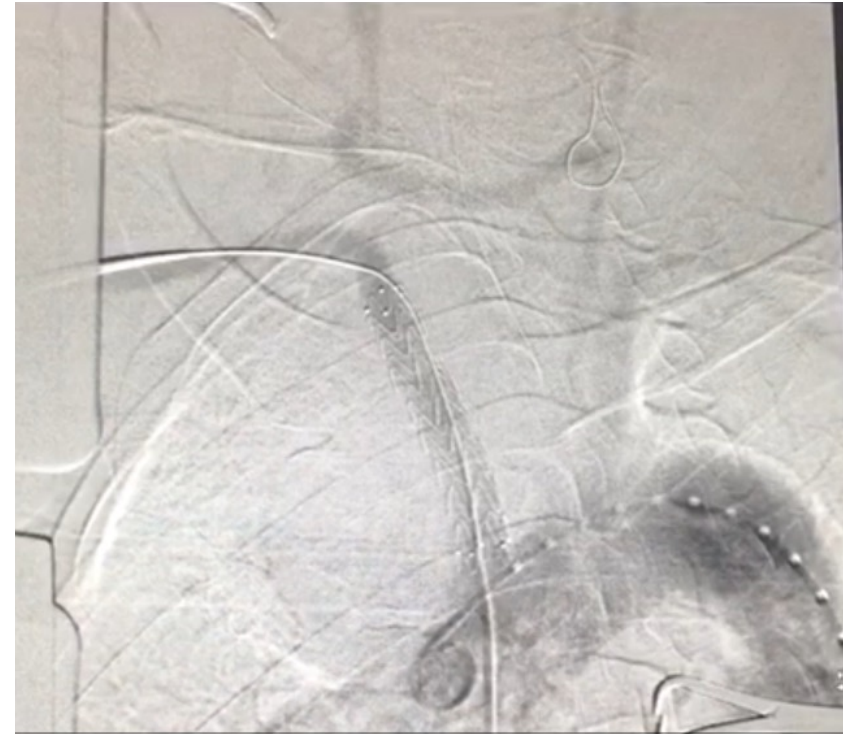


Remove the infected area
Disadvantage: Invasive, Blood
loss, tissue adhesion,

Hybrid surgery

- Left to right carotid bypass: Prevent cerebral emboli from aneurysm + separate from infected area.
- Brachiocephalic artery stengraft

Ct scan: small fistula (2mm) from aneurysm to right lung





Thank You

