# PERCUTANEOUS TREATMENT OF RUPTURED CHRONIC FALSE ANEURYSM OF THE ASCENDING AORTA AND VALSALVA SINUS IN THE RIGHT VENTRICLE

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# Disclosure Statement of Financial Interest

I, (Jamel Langar) DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

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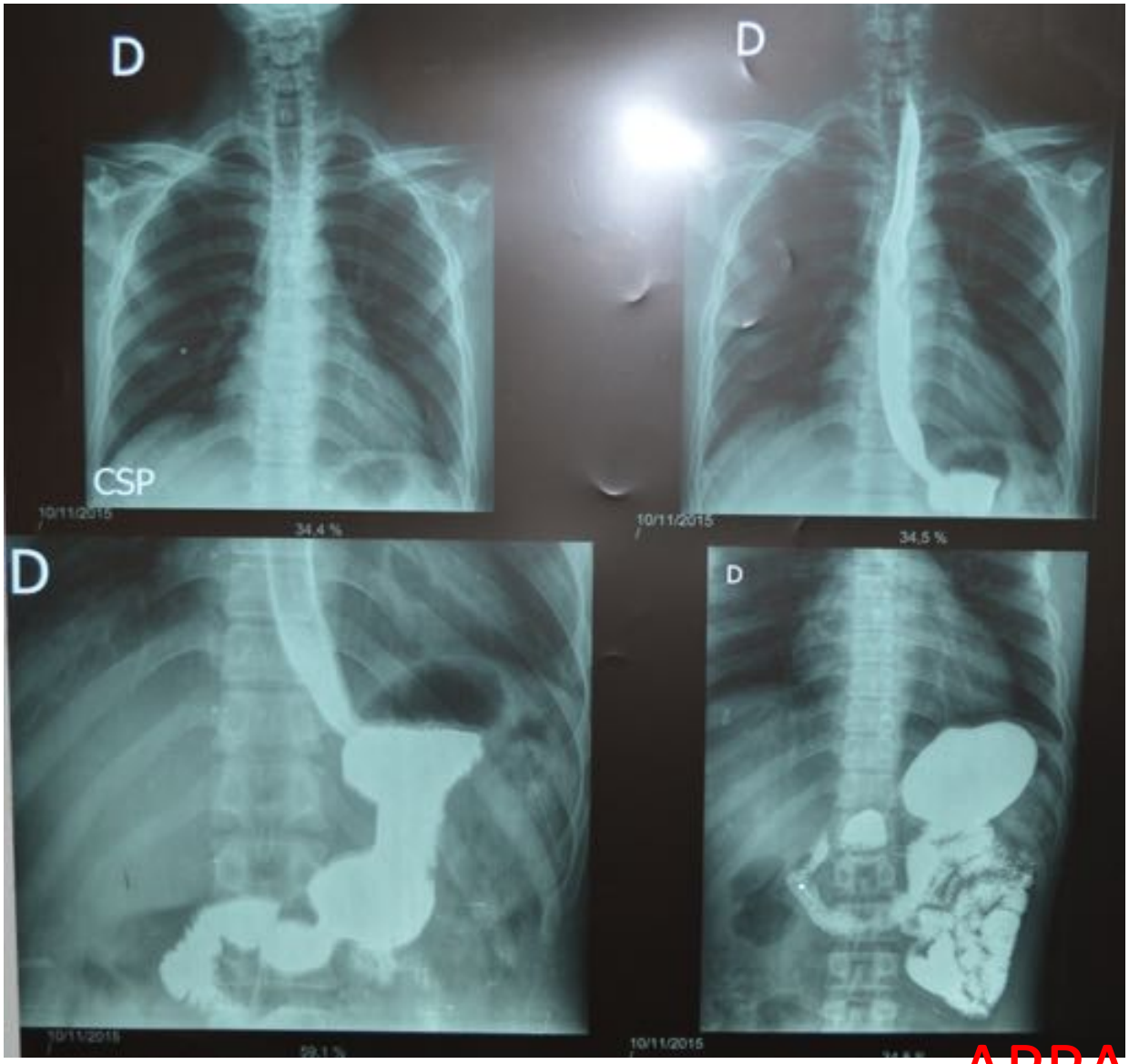
# CASE HISTORY:

- 34 yo Male patient.
- No relevant past medical history.
- No cardio vascular risk factors.
- Sudden onset of Dyspnea in february 2016.

# X RAY FEBRARY 2016

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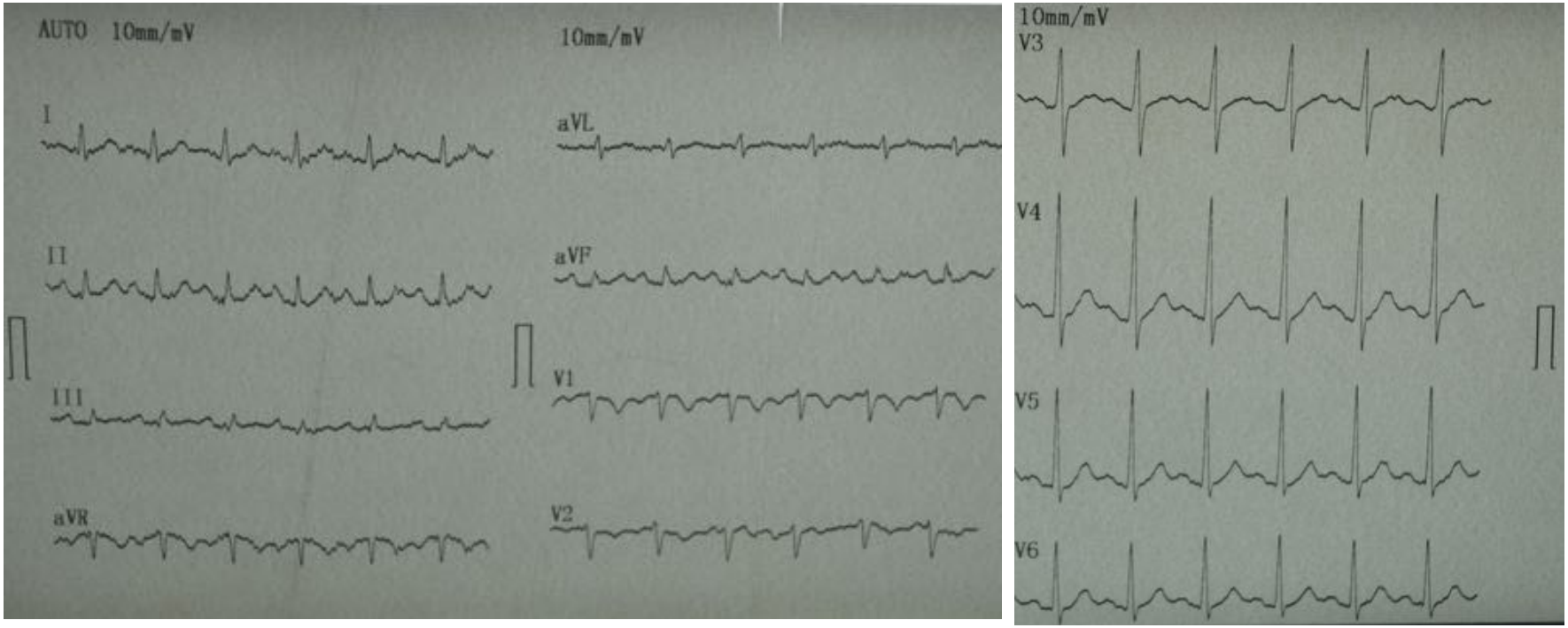
# ECG february 2016




Almost normal ECG

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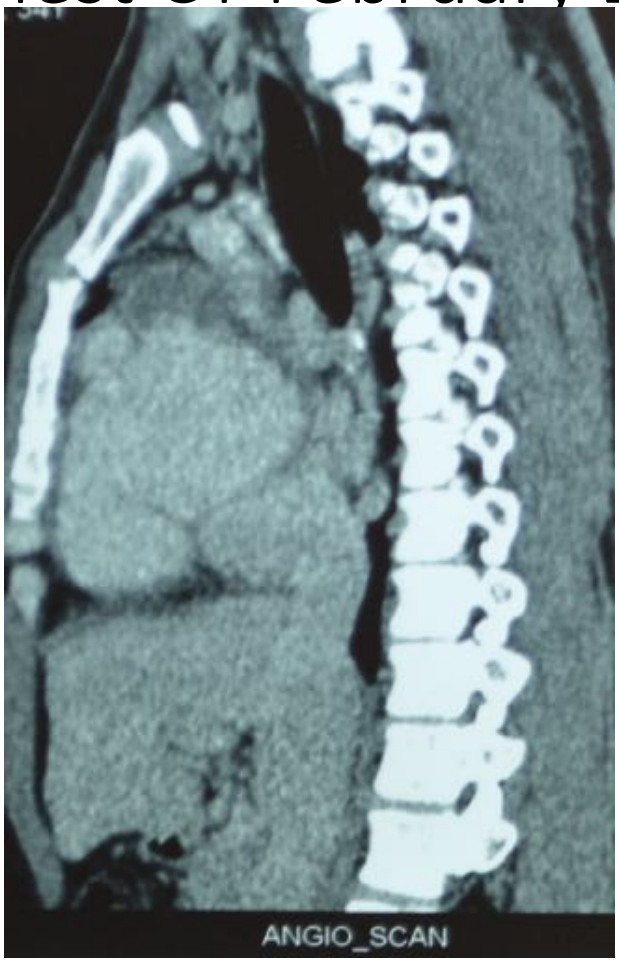
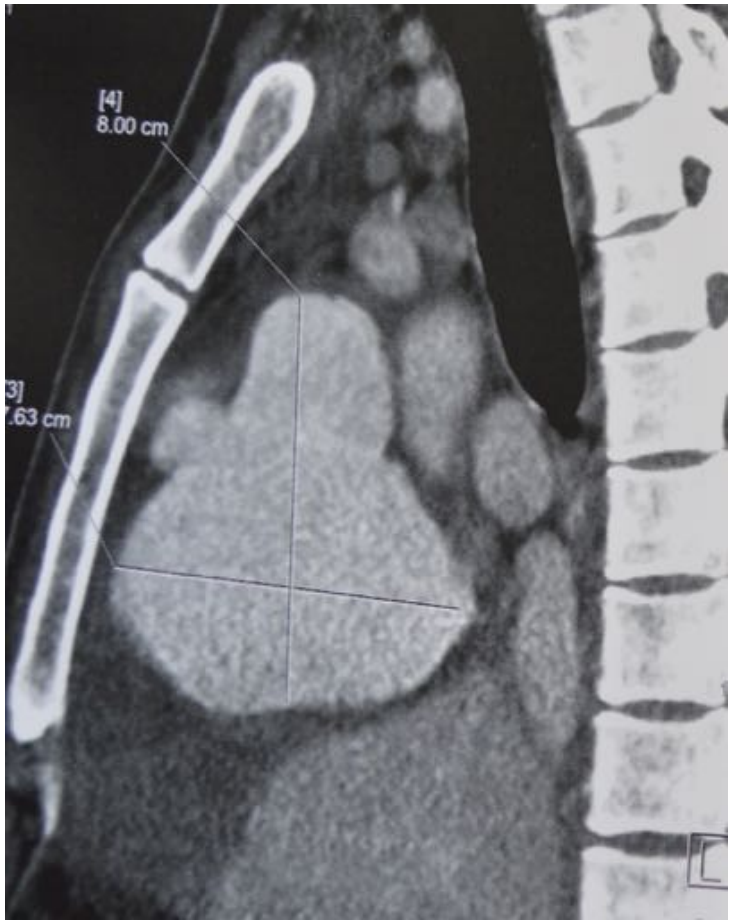
# Chest CT February 2016




Huge 8/7.63 cm aneurysm connected to the RV

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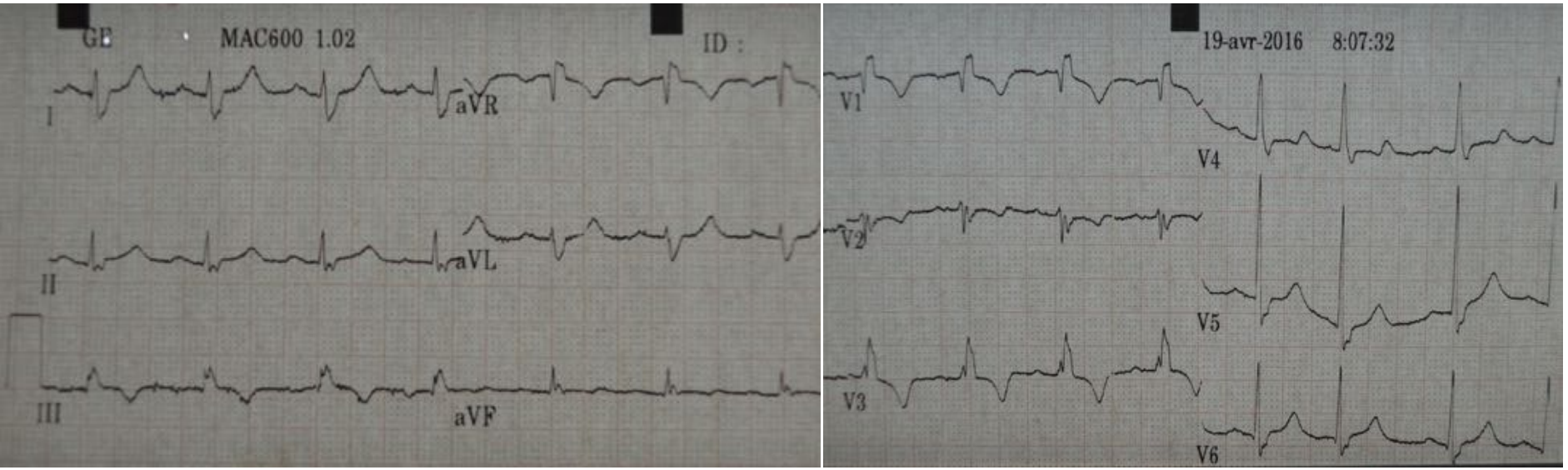
# April 2016

- Self referal
- Patient not able to walk 10 m while he was very active few months ago.
- Skinny, Cachectic, Exhausted
- Low BP (80/50)
- Examination: Continous murmur 2d left intercostal space
- Raised JVP, enlarged pulsatile liver

# ECG April 2016




Sinus rhythm, RBB, Inferior peri-infarction block

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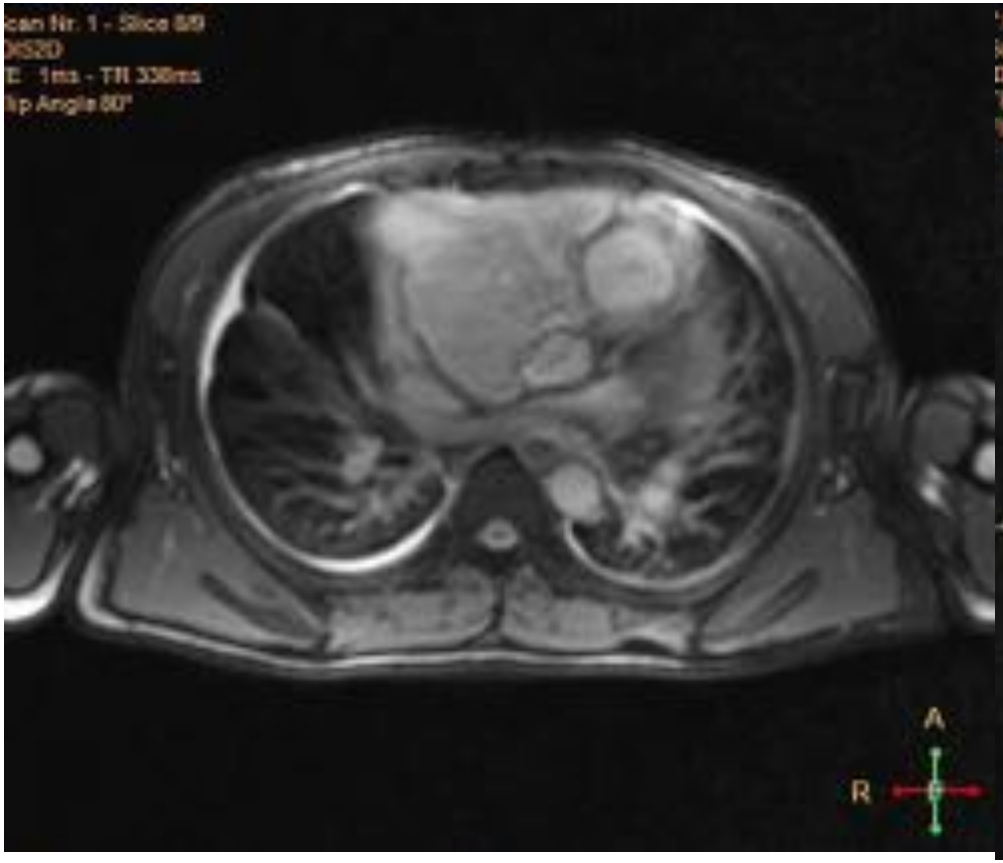
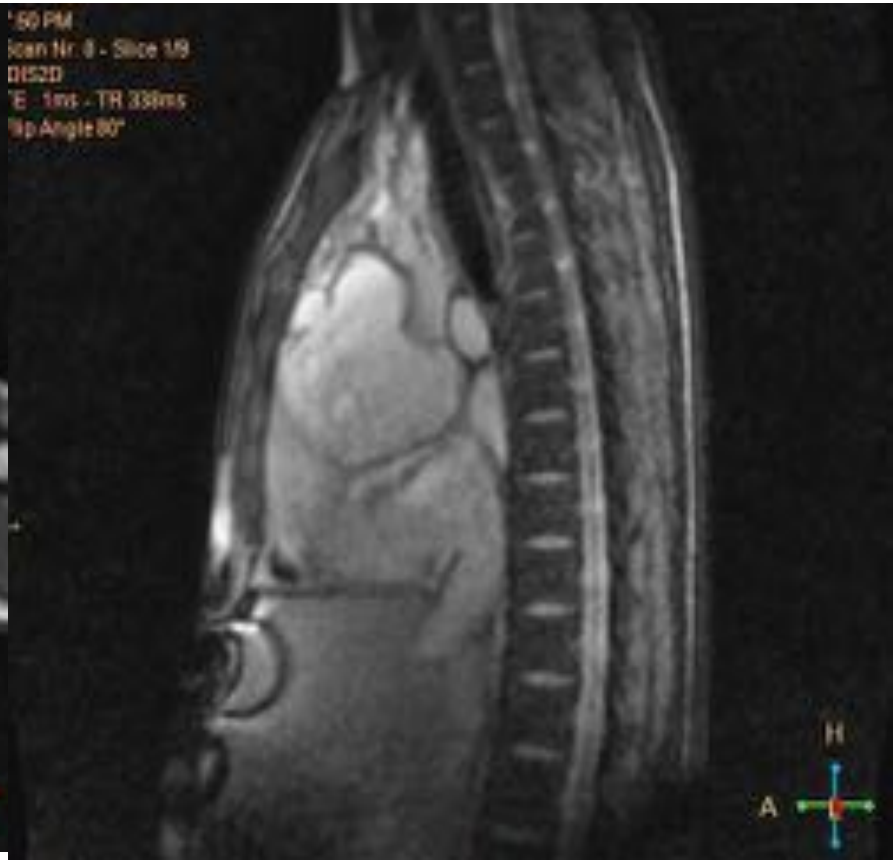
# Cardiac MRI




8/9cm Aneurysm connected to the RV

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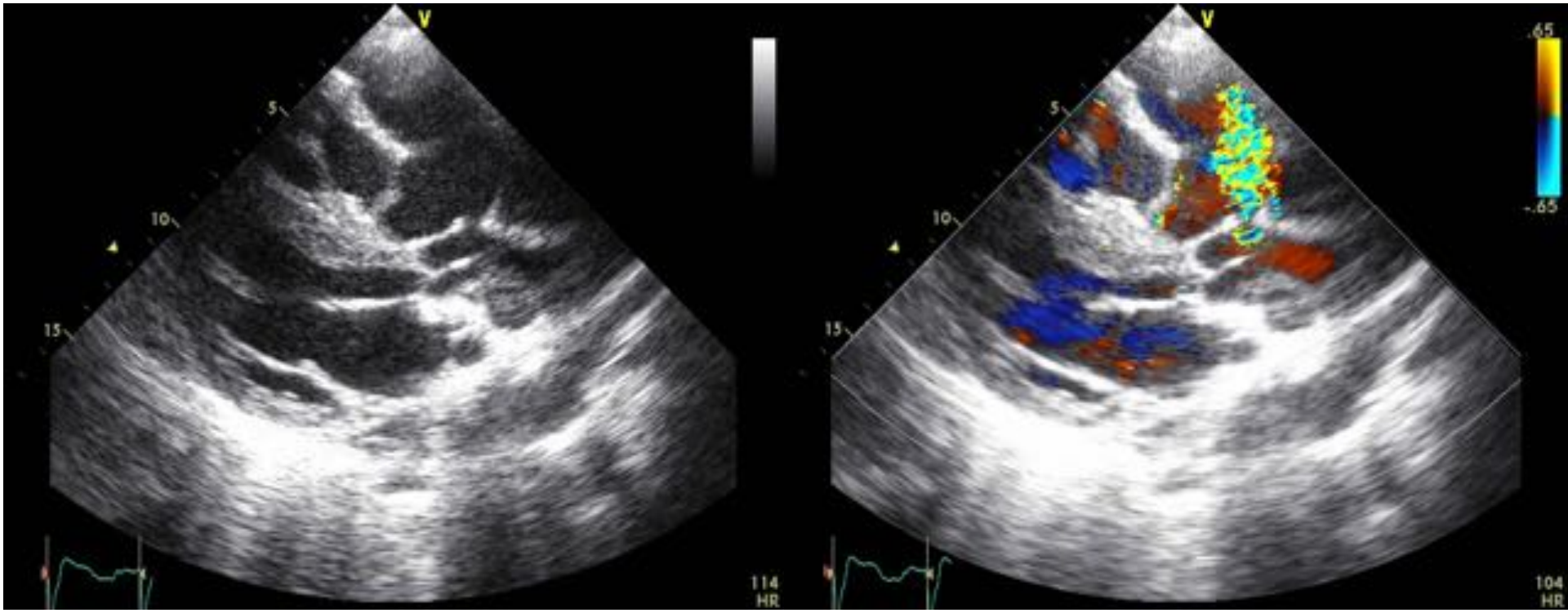
# Trans thoracic echocardiogram




An 8mm Free wall aortic tear leaking in a false aneurysm

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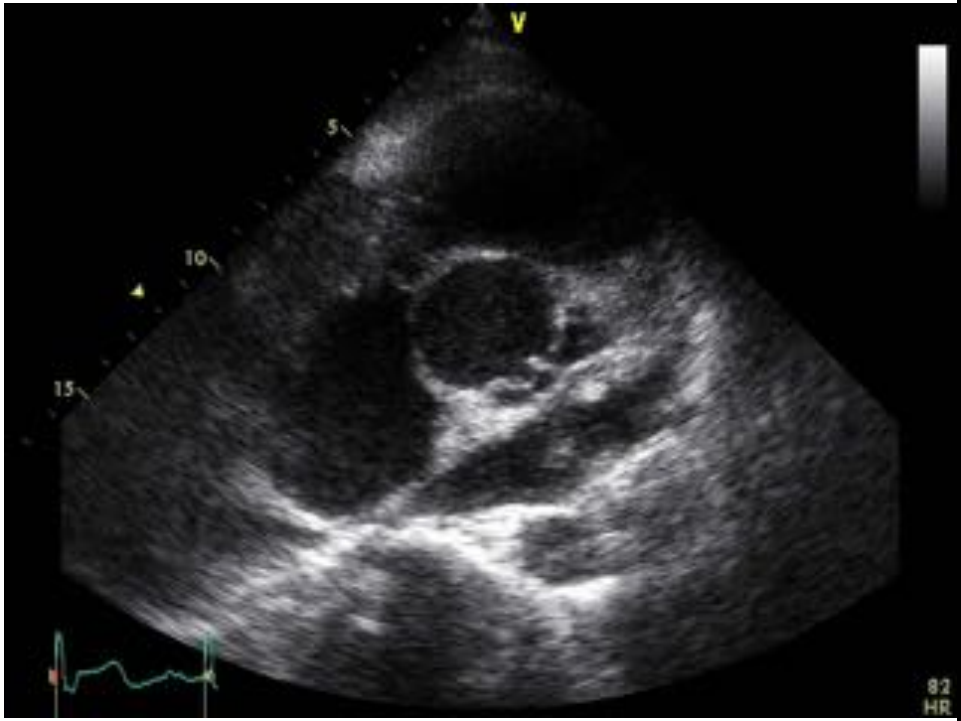
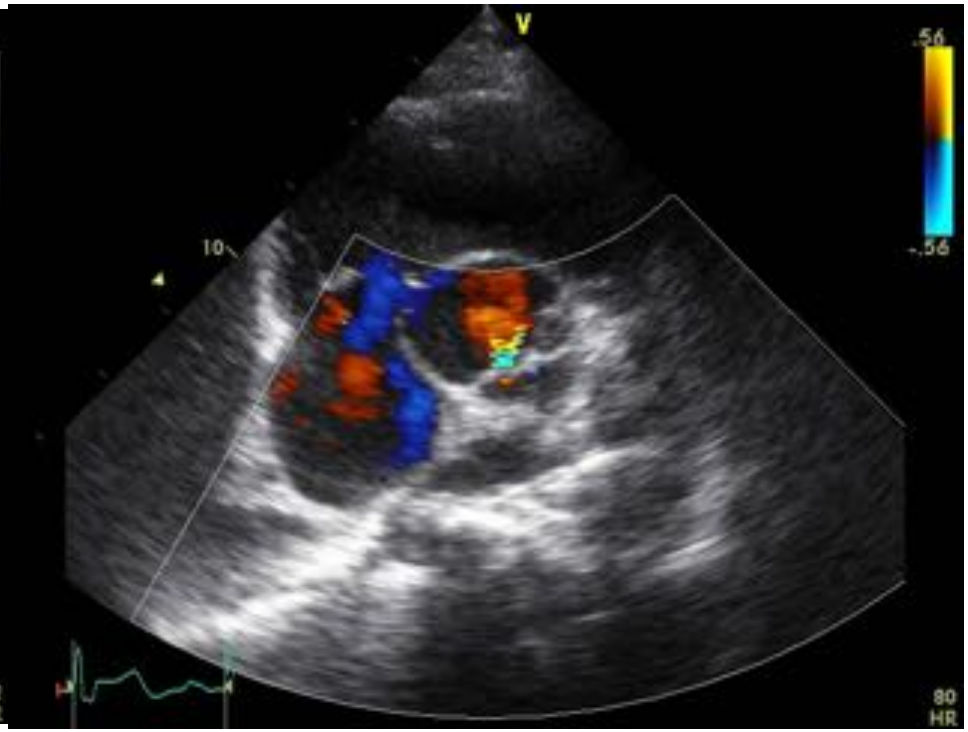
# TTE short axis view at the level of the aortic valve




A 3 mm Right sinus of valsalva rupture

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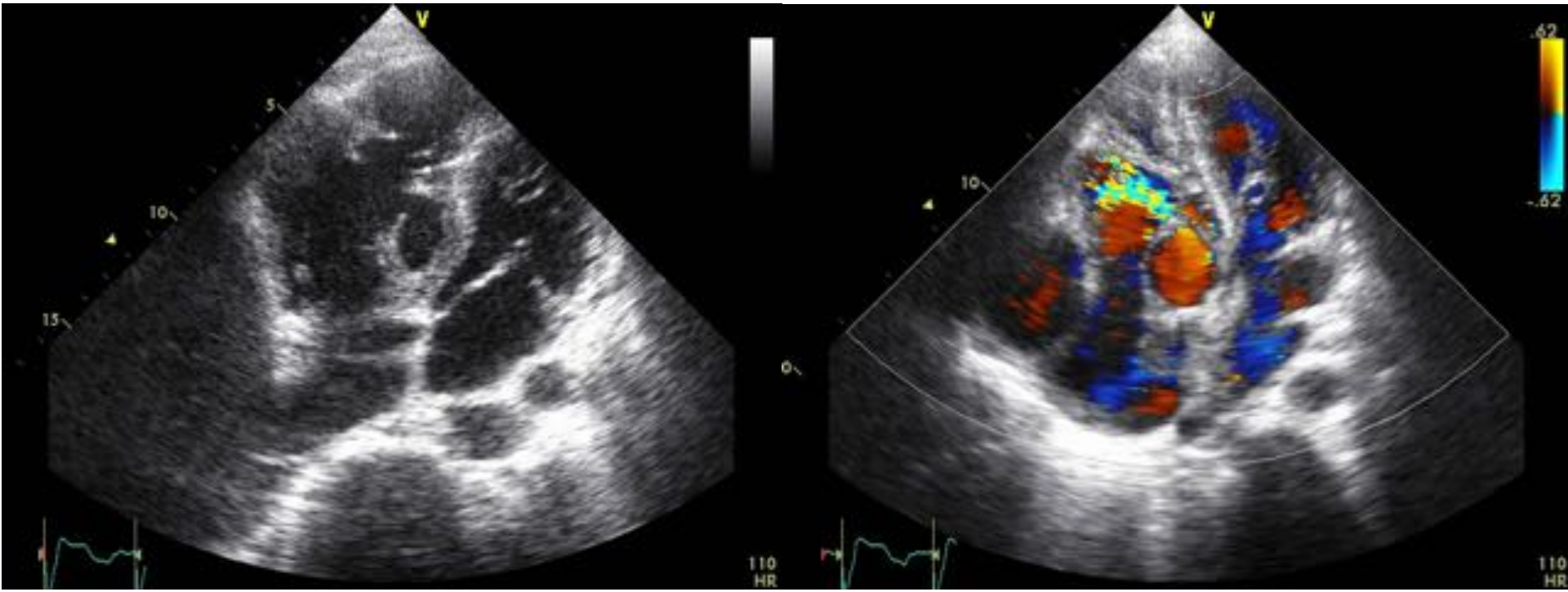
# TTE Apical view




A 6 mm Rupture of  false aneurysm in the RV cavity

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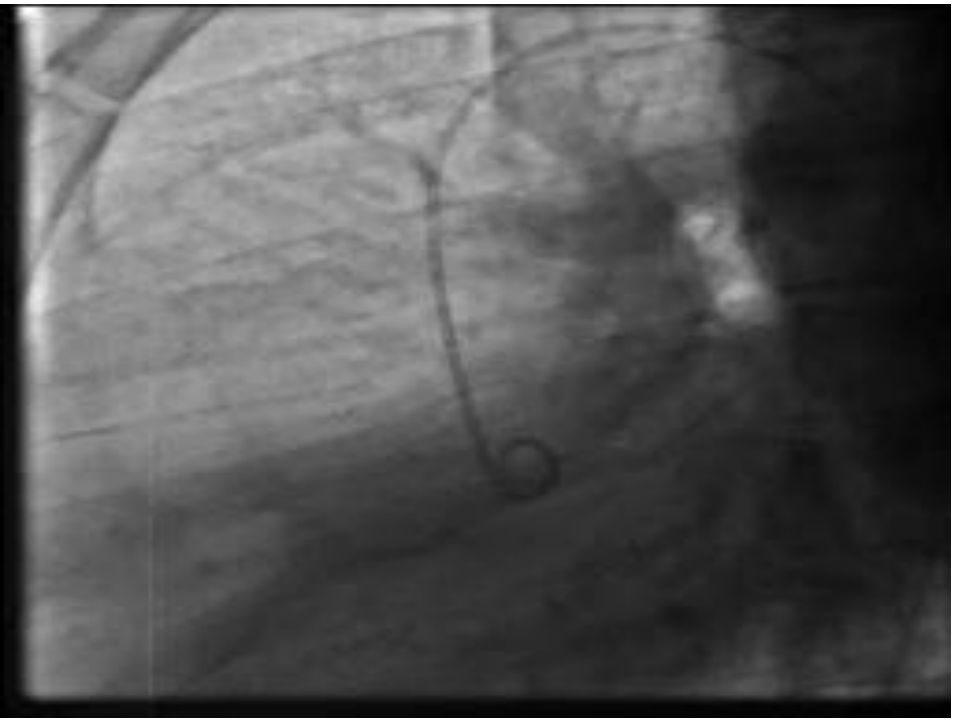
# Back to patient history

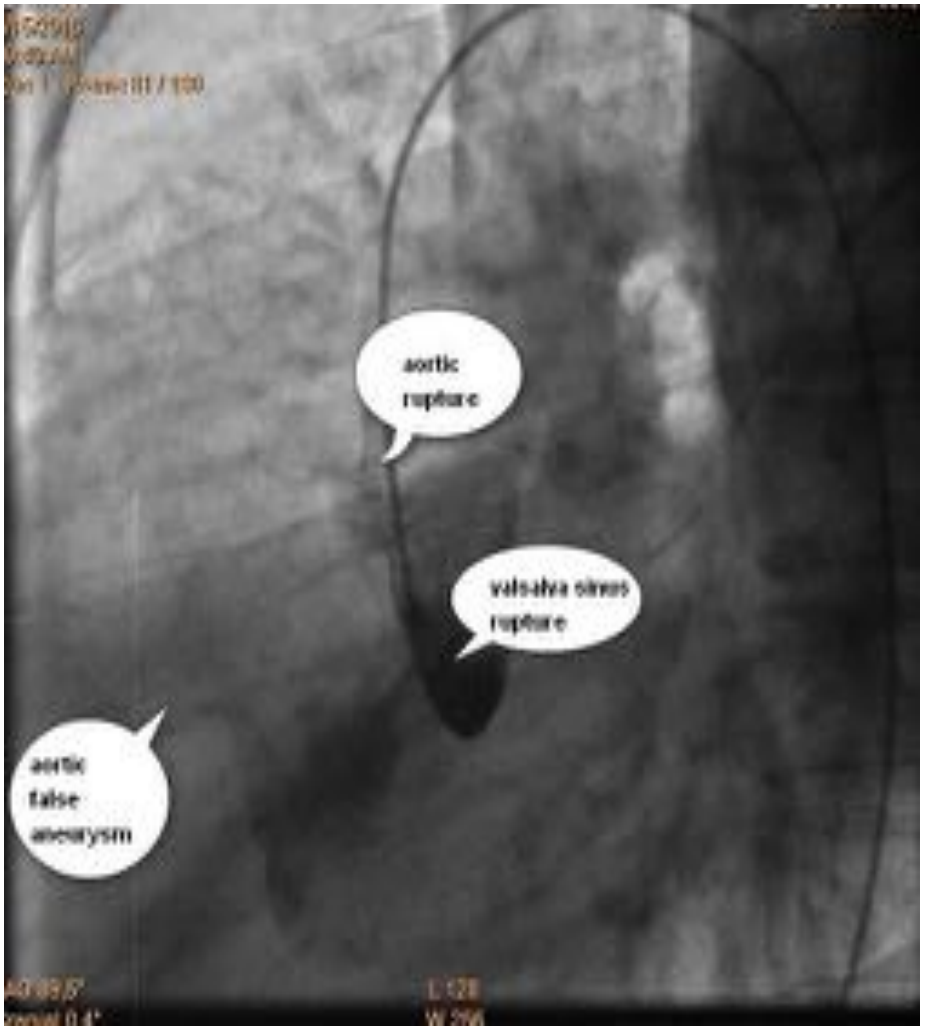
- 1998 : the patient while riding a horse  hit a branch of a tree and felt down.
- Had severe chest pain for few weeks, than  pain resolved gradually.
- Never had a medical consultation

- Our hypothesis: Aortic tear following the blunt chest trauma. Gradual developpement of a false aneurysm.
- The occurrence of the abrupt dyspnea correspond to the rupture of the false aneurysm in the RV.
- The timing of the rupture of the valsalva sinus can not be precisely established.

- Decision to perform an aortic angiography and a cardiac catheterisation.
- The possibility of percutaneous closure of the defects was discussed with the patient and the treating cardiologist as the surgical risk was estimated high.
- During the procedure were present : a cardiac surgeon, a vascular surgeon, an anaesthesiologist ,an  echocardiographer and the treating cardiologist.

# Aortic angiography LAO



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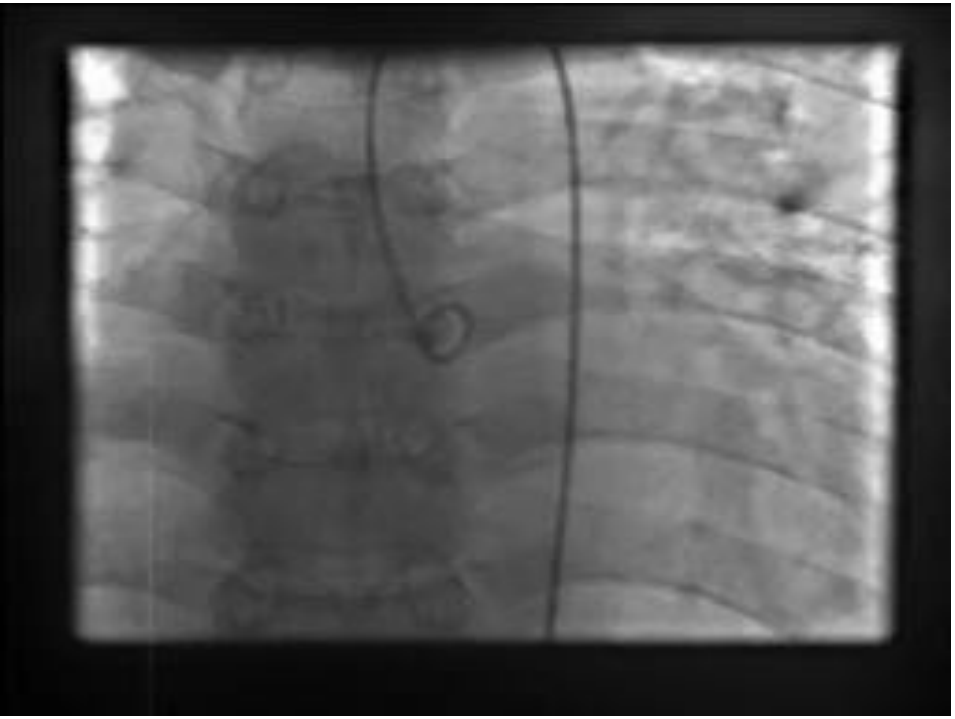
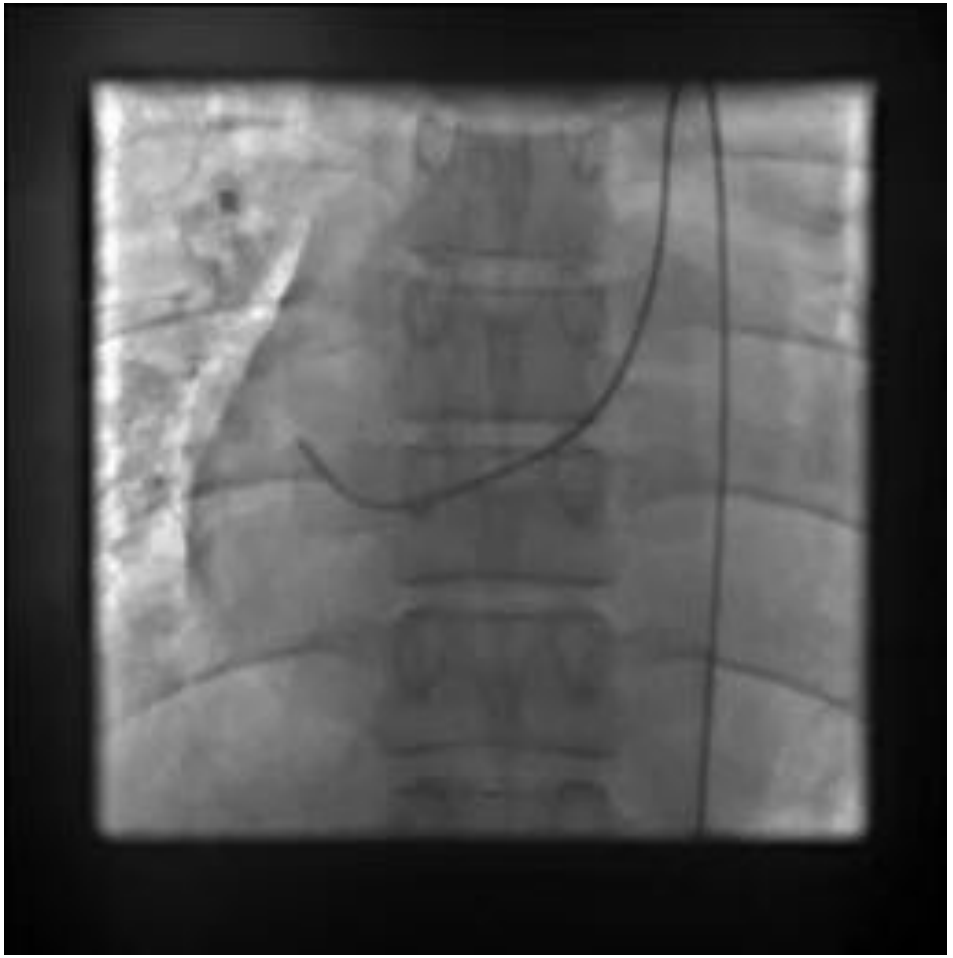
Non selective Left coronary artery angiography



**While searching the RCA we entered the false aneurysm**



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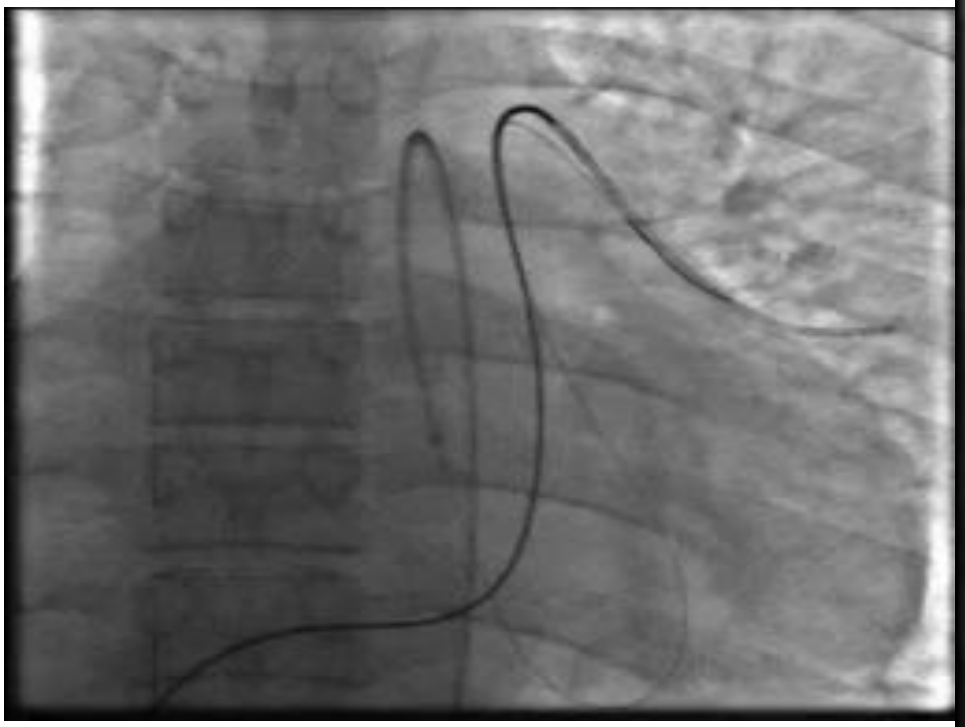

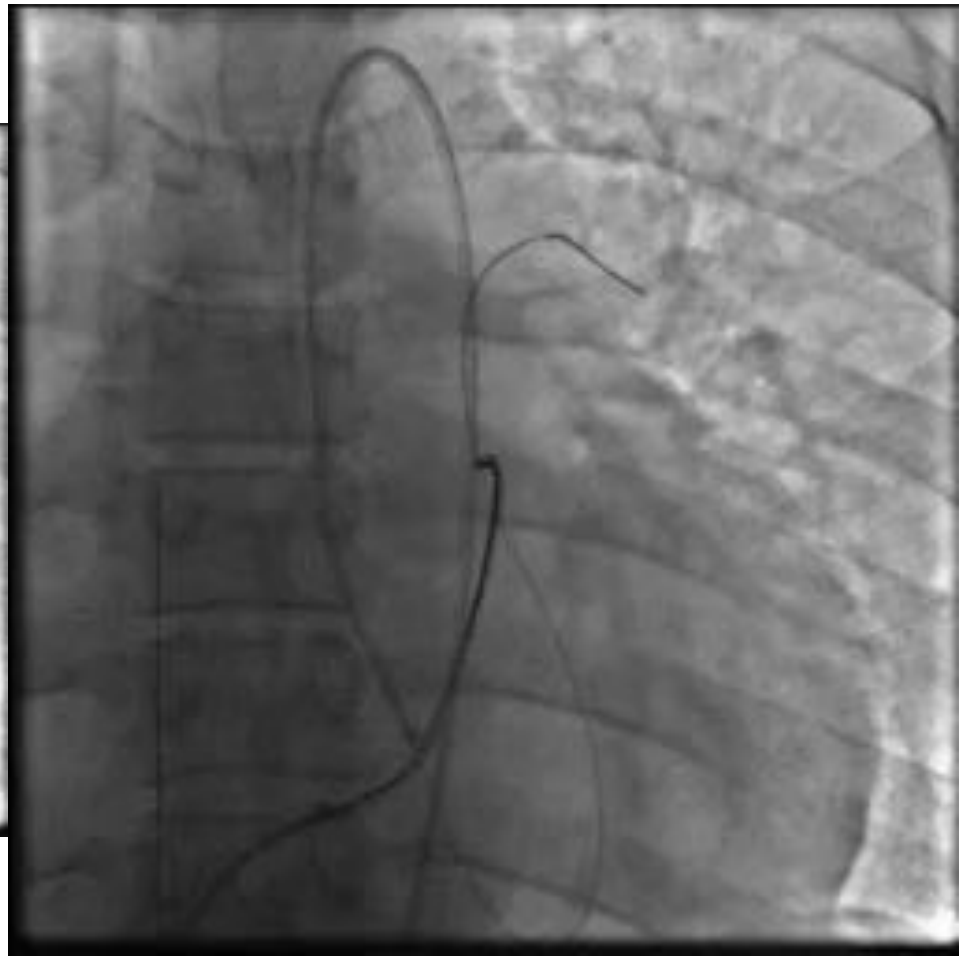

**0.18 GW coming from the aorta ,**
**than the false aneurysm crossed the RV defect**
**and was pushed to the left PA**

**0.18 GW snared in the PA**
**and pulled to the IVC**

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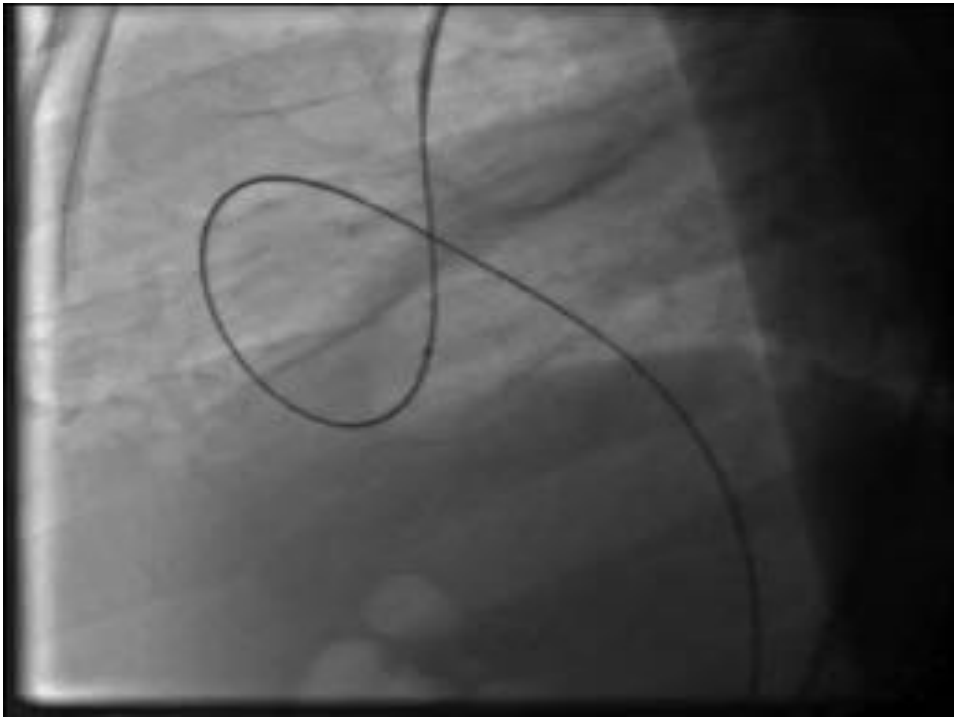
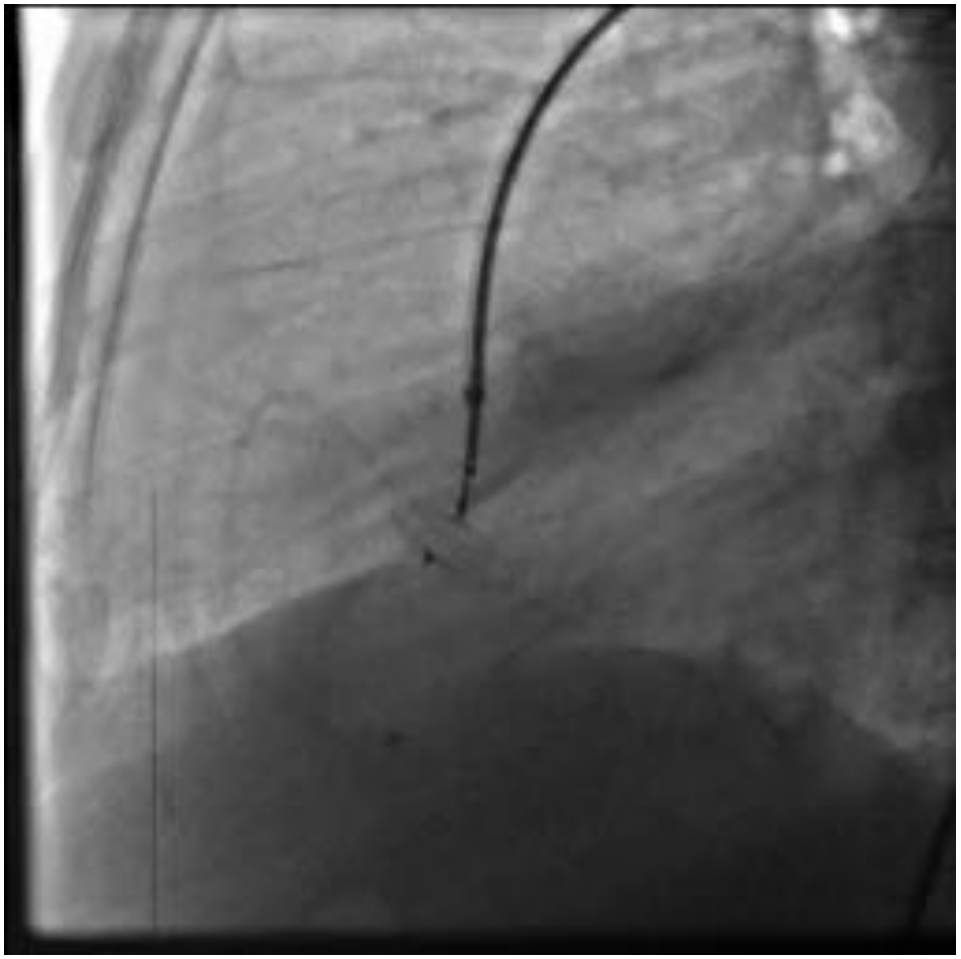


A supertiff 0.35GW snared in the IVC
Arterio-veinous loop established



8 mm ASD occluder device inserted through
A 7F sheath from the arterial side used
to close the RV defect

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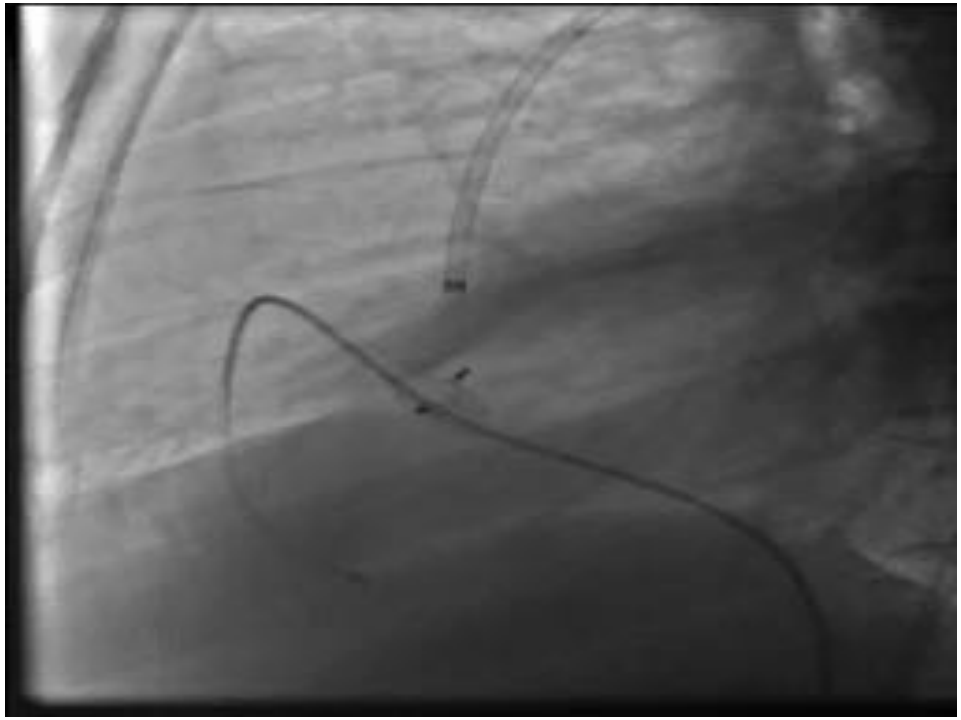
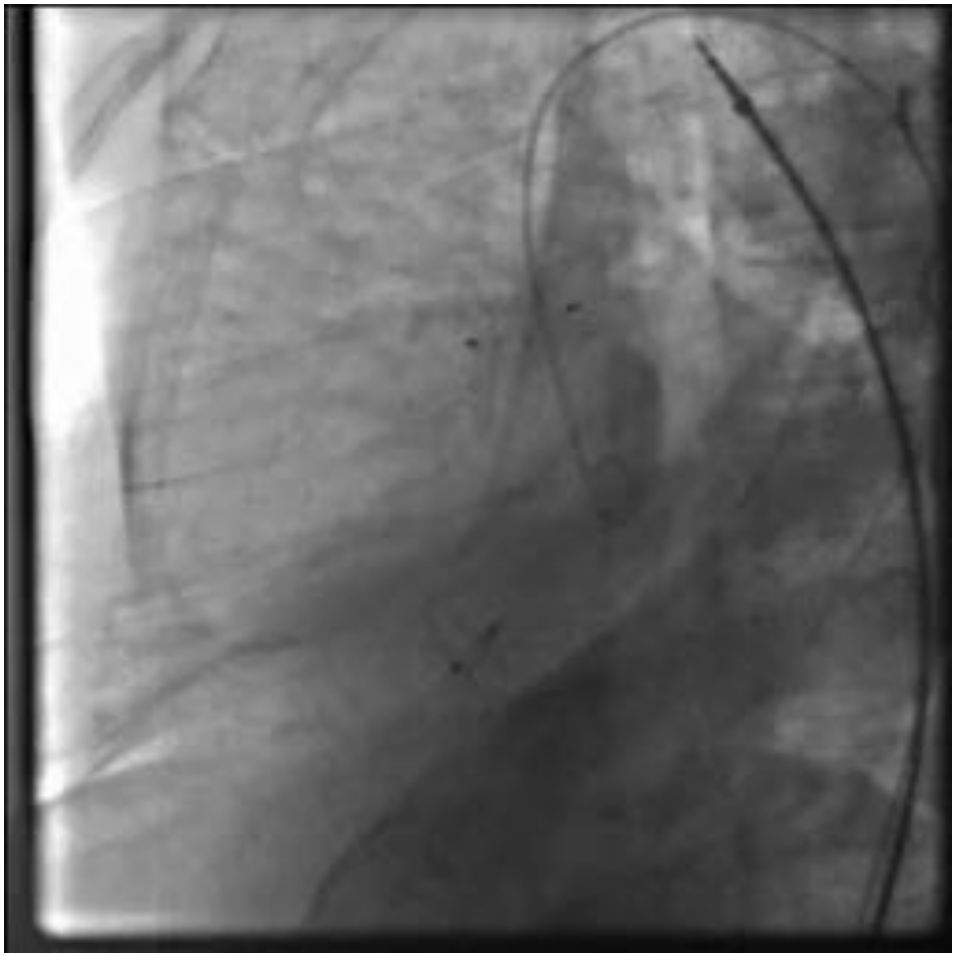


Huge aneurysm opacification after RV defect closure



Free wall aortic rupture closed with an 10 mm ASD occluder device inserted through the same 7Fr sheath from the arterial side

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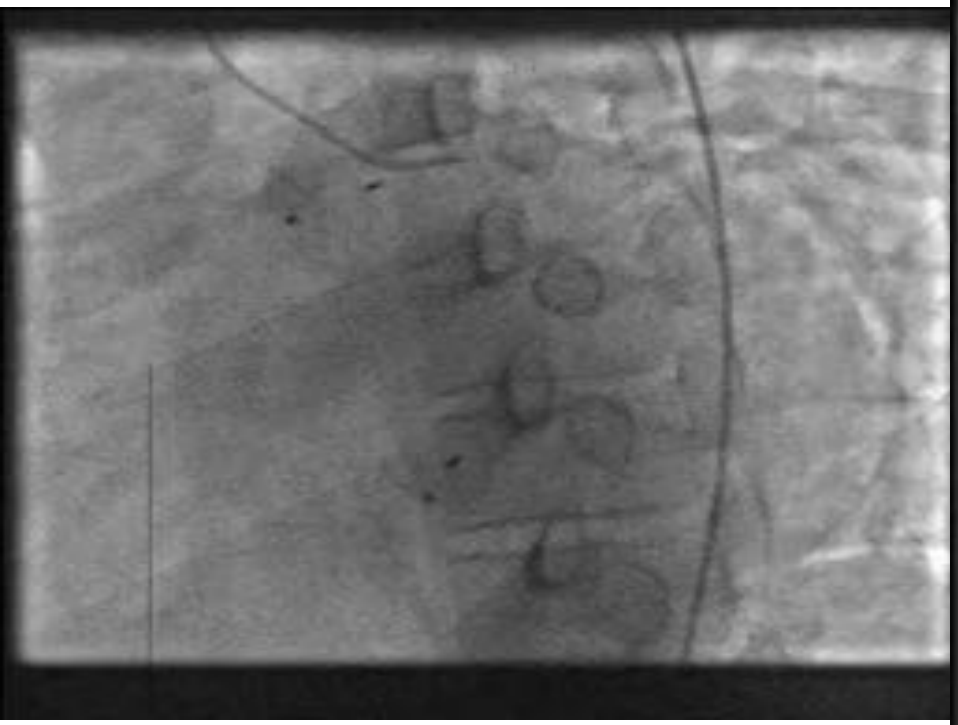
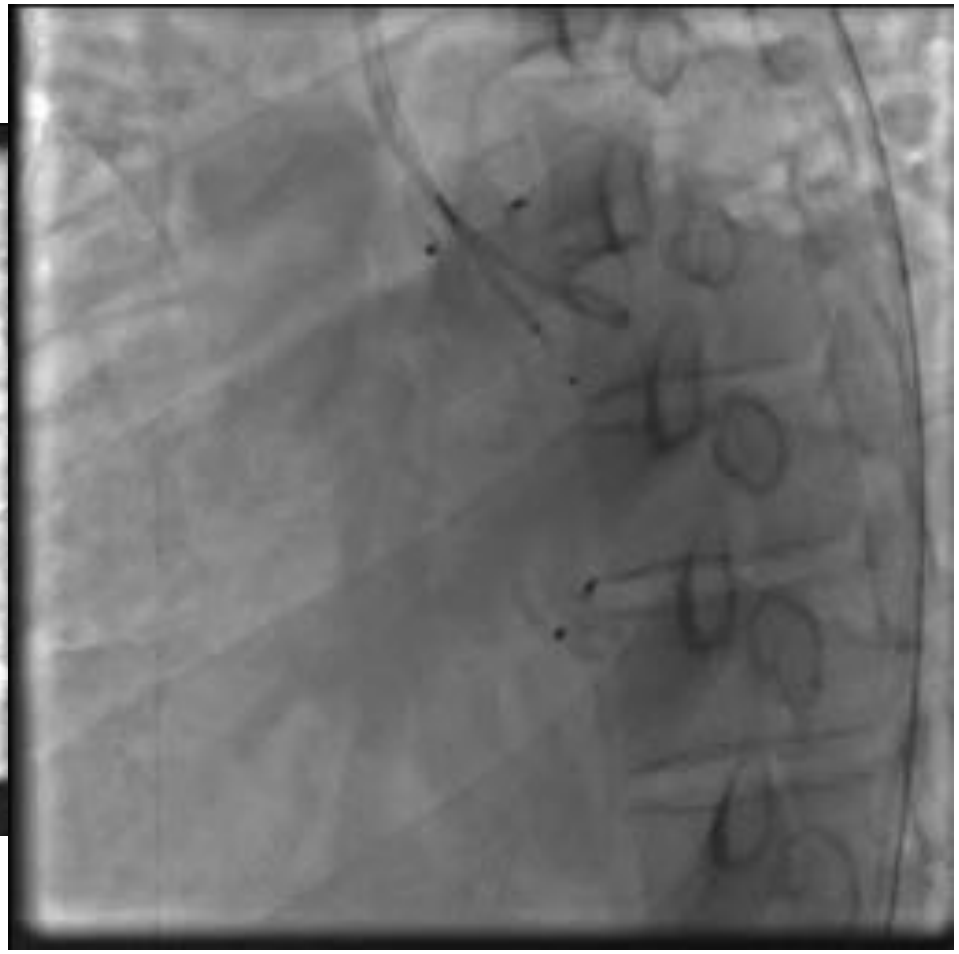


Before closing the valsalva sinus rupture
A selective left coronay angio confirmed
The RCA occlusion



Closing the sinus of valsalva rupture
With a 5/4 mm ADO II PDA occluder
Inserted through a 5fr sheath from arterial side

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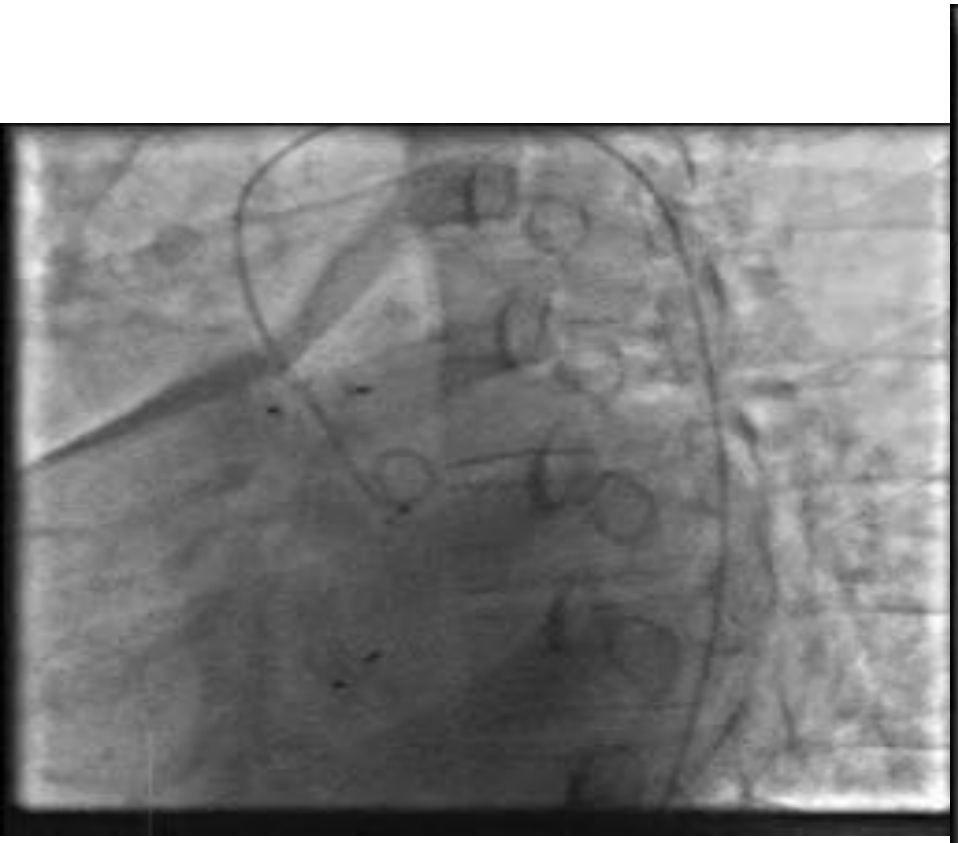

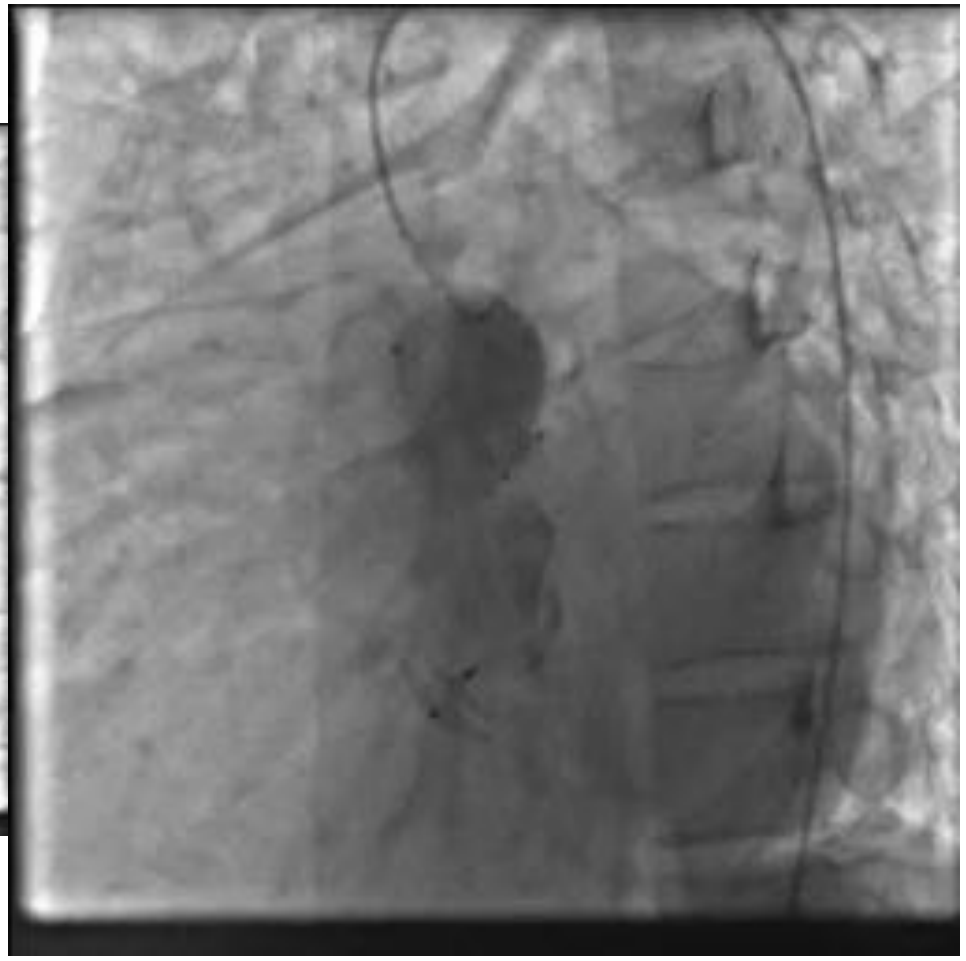

**Final angio: stable devices, residual shunts Are still there. Mild to moderate AR**

**Contrast stagnation in the Aneurysm after angio**

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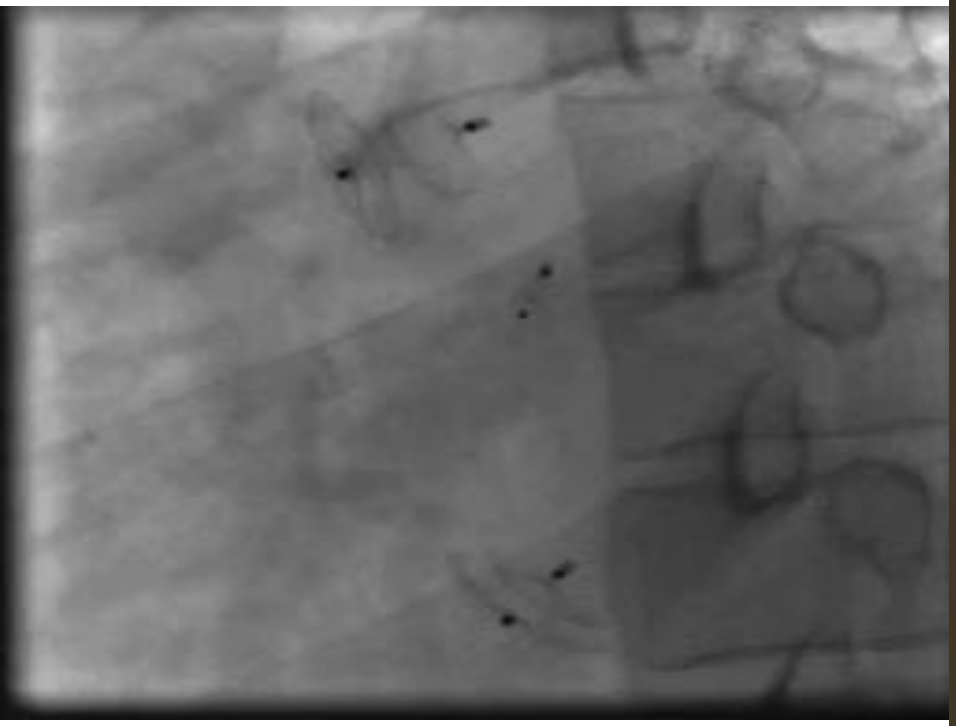
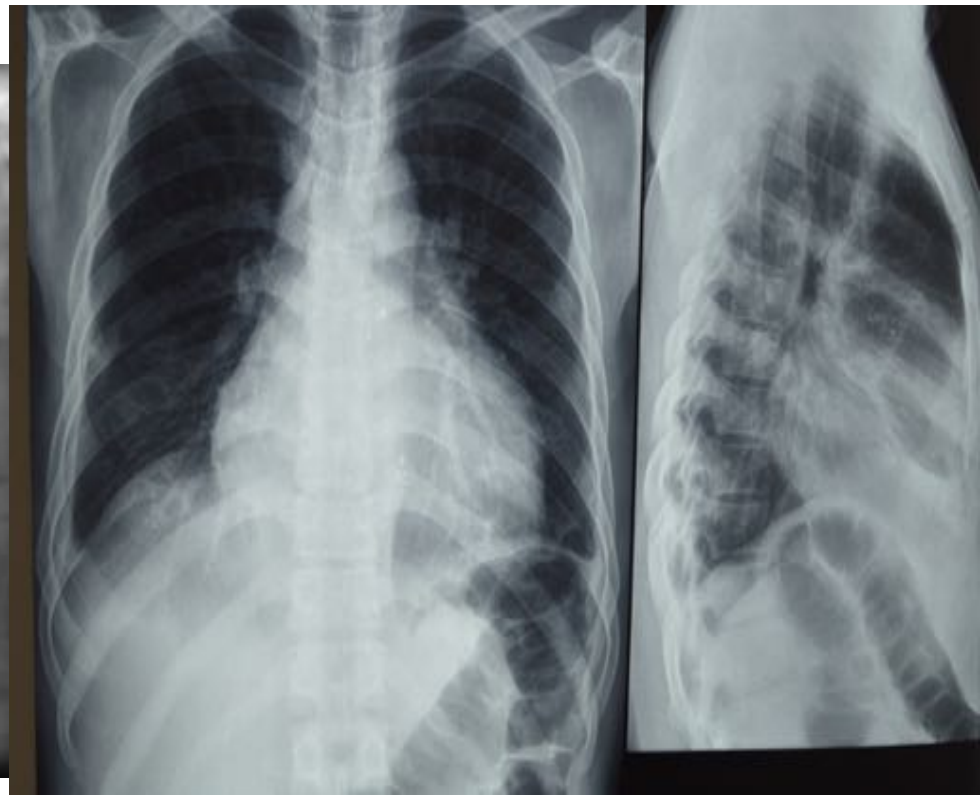
# OUTCOME OF THE PROCEDURE

- Patient able to walk without limitation the second day.
- Peripheral signs of the right side failure disappeared gradually.
- No ECG changes.
- PA pressure decreased from 70 to 25 mmHg.
- RV size decreased

# STABLE DEVICES 2 AND 7 DAYS LATER



**Fluoroscopy control 2 days later**



**Chest X ray 7 days later**

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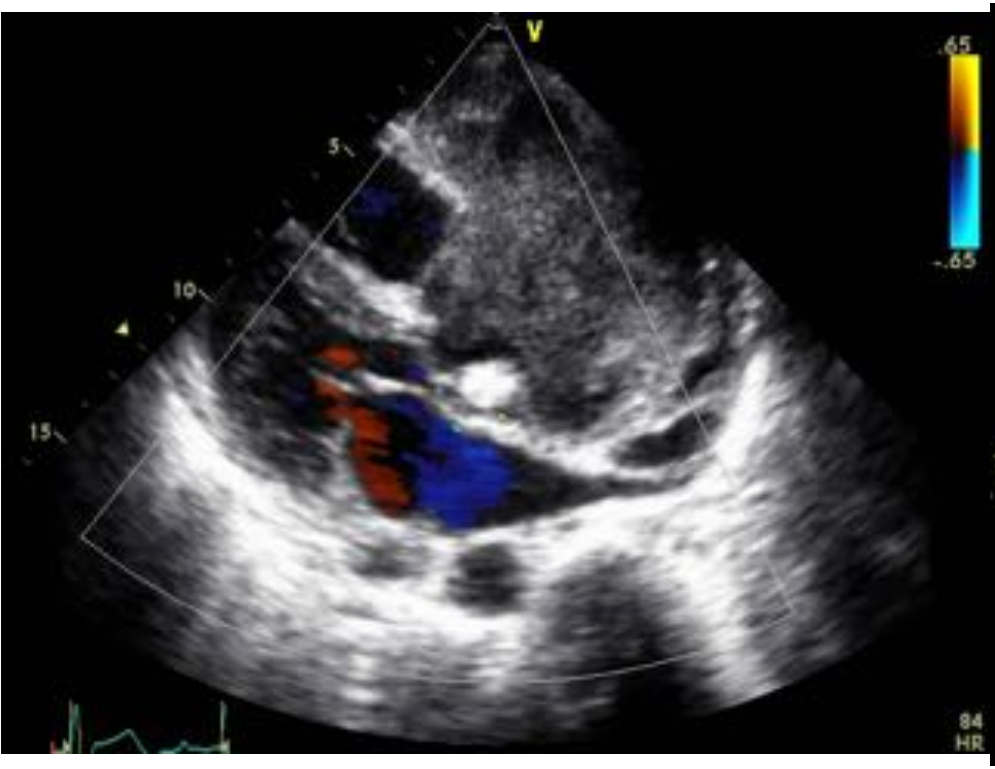
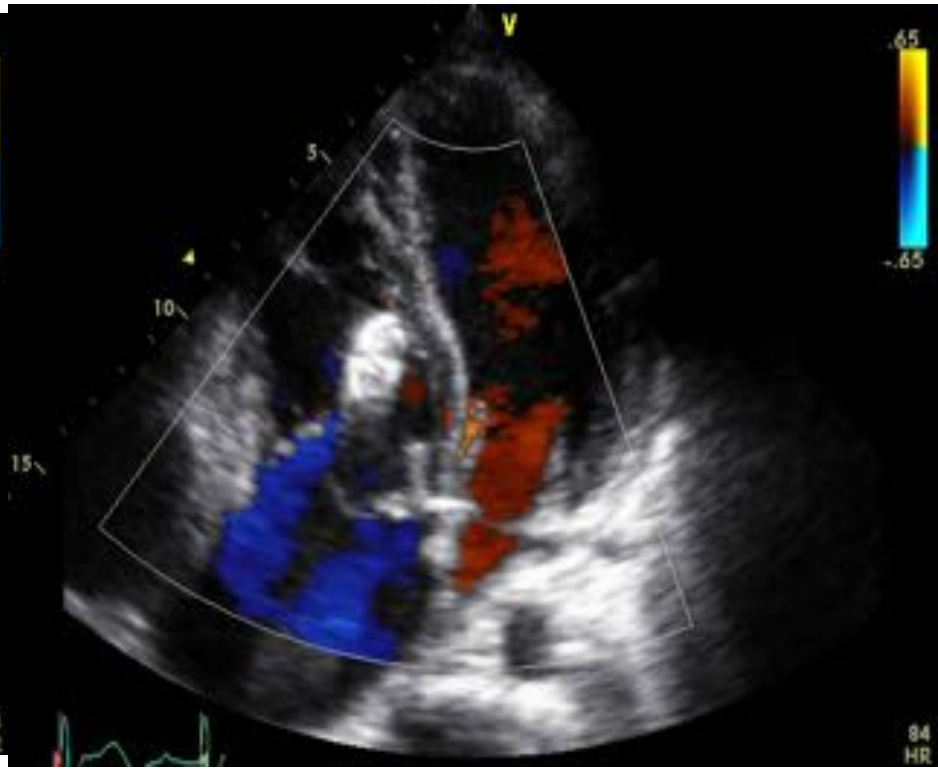
# TTE control  at 10 days: massive thrombosis of the aneurysm. No residual shunt

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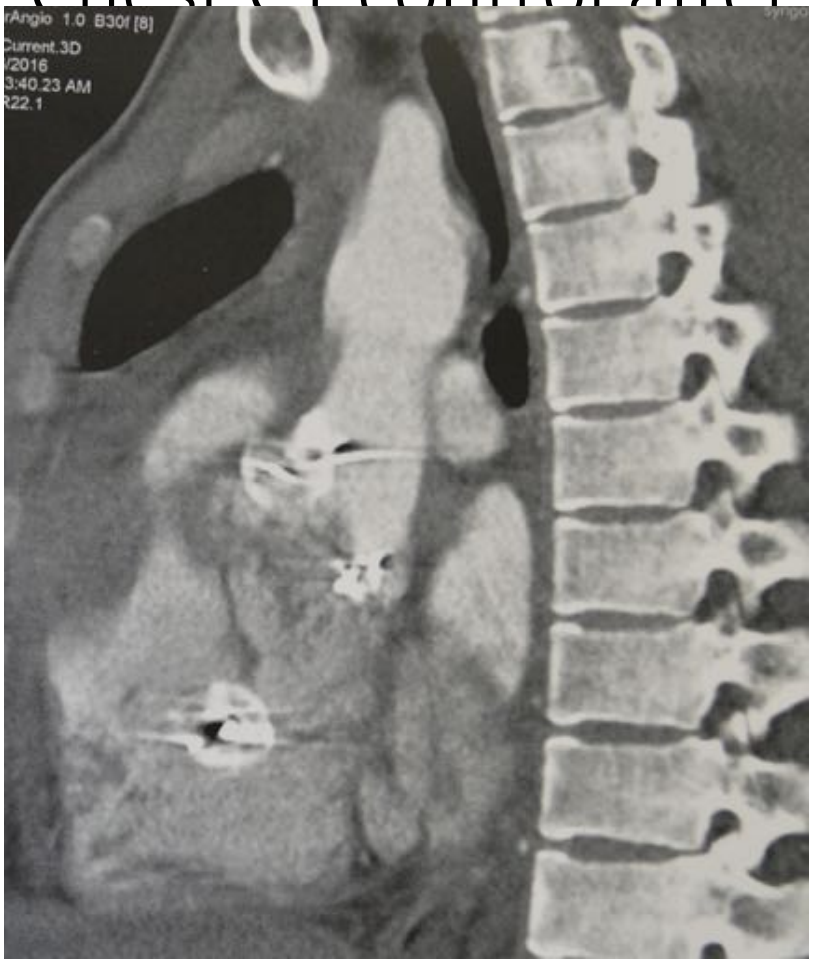
# Chest CT control after 10 days




**The three devices are in place**

**Thrombosed false aneurysm**

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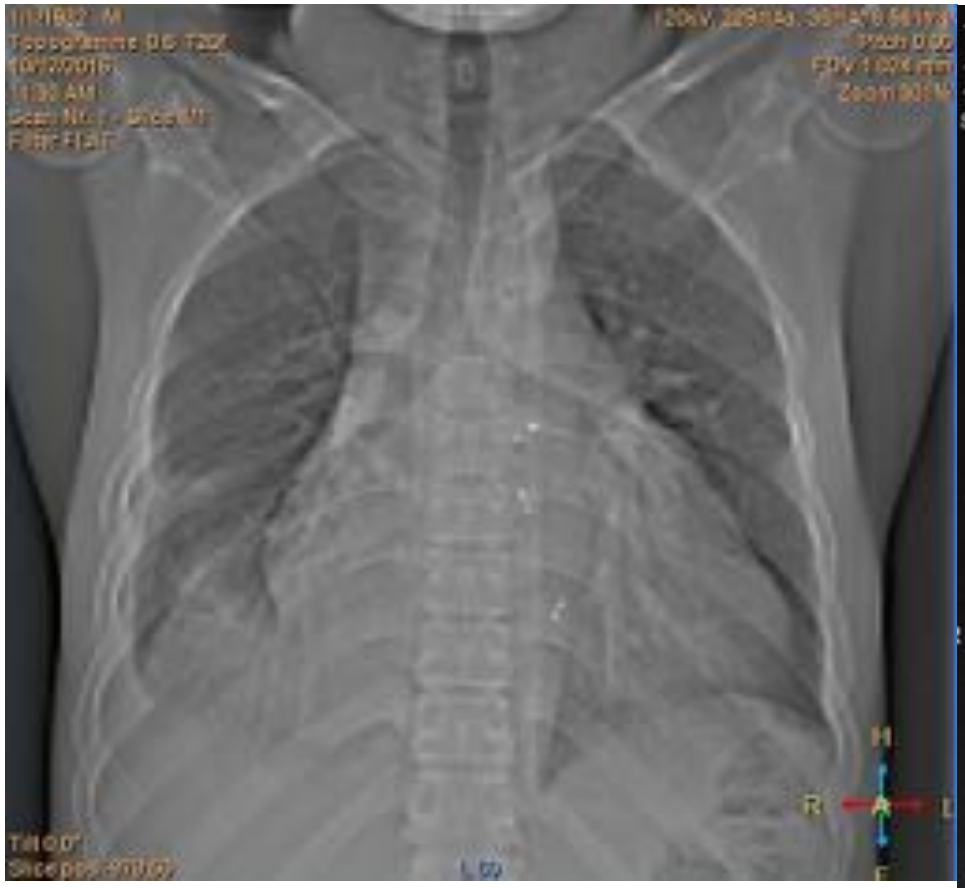
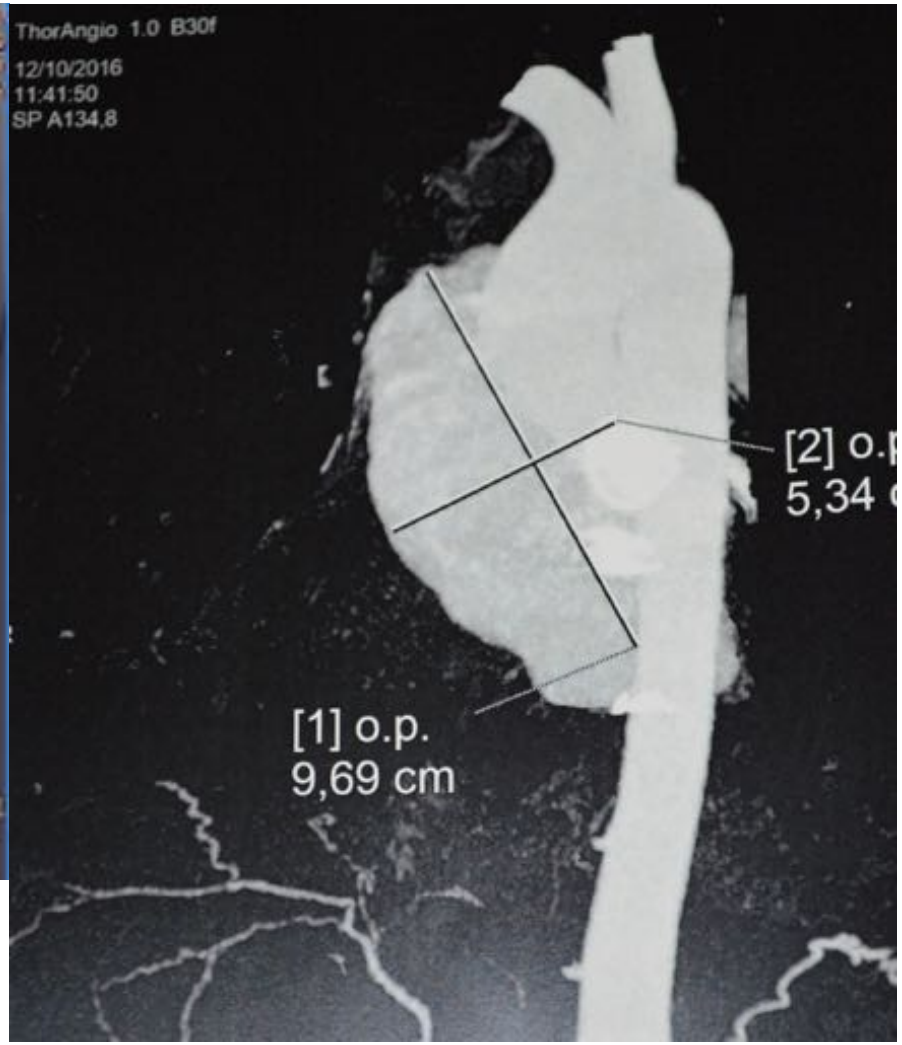
# OUTCOME OF THE PROCEDURE

Patient kept on 100 mg aspirin. 75 mg clopidogrel. 50 mg Atenolol .
Plan to keep the treatment for 6 month.

Traveled by plane (5 hours fly) without problems.

# OUTCOME OF THE PROCEDURE






**CT SCAN OCTOBER 2016: devices in place, Aneurysm size decreased**

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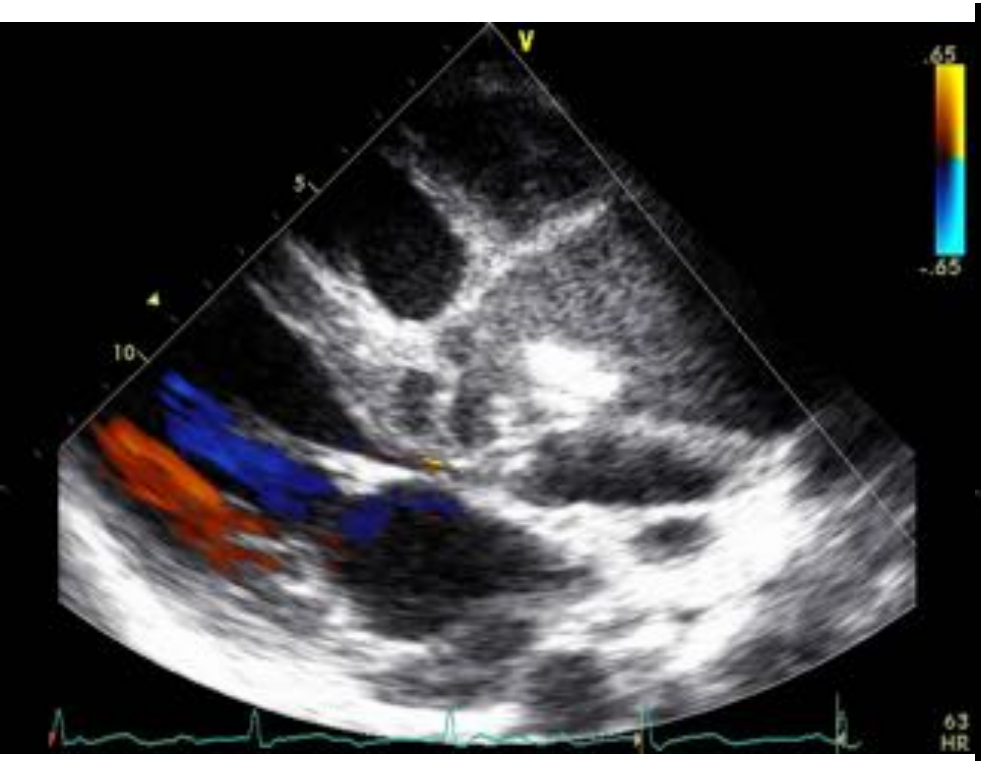
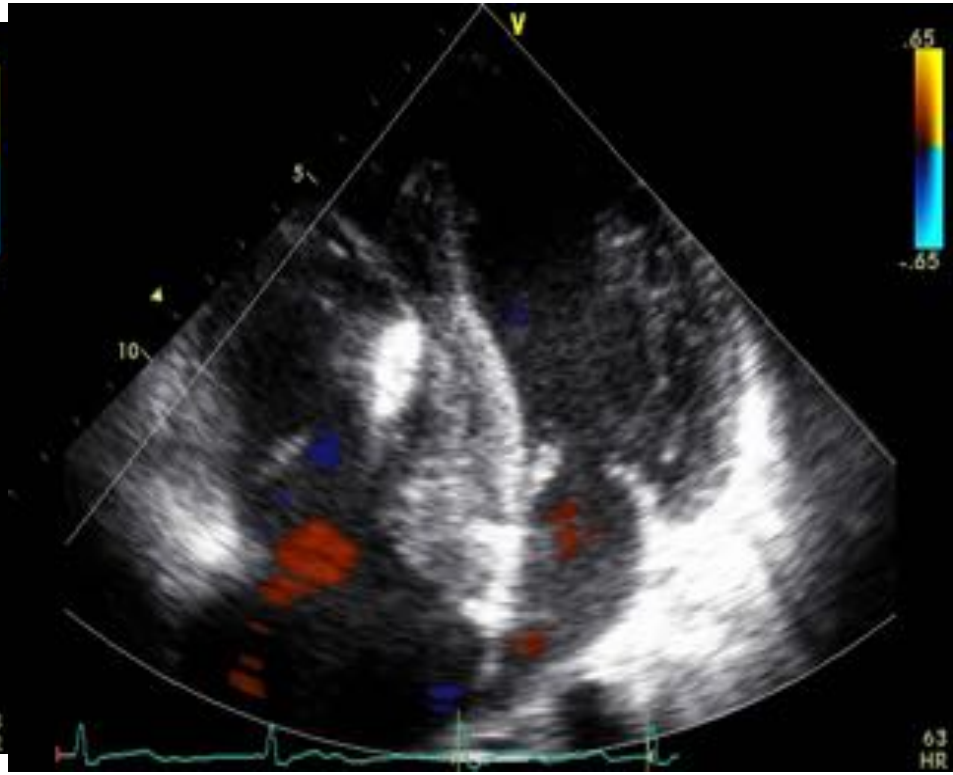
# OUTCOME OF THE PROCEDURE




**Six month echo control**

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# Conclusion

- A multi ruptured false aneurysm of the ascending aorta and the right valsalva sinus was successfuly closed with 2 ASD occluder devices and one ADO II PDA occluder device with a good immediate and and 6 month result.
- The procedure was done with TTE guidance avoiding the need for general anesthesia
- A huge aneurysm can lead by compression to a coronary occlusion. (possible cause of the rupture in the RV)
- To our knowledge this is the first reported case of a percutaneous treatment of multi- ruptured chronic false aneurysm of the ascending aorta.

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Thank you

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