A silent, but potentially fatal complication after TAVR

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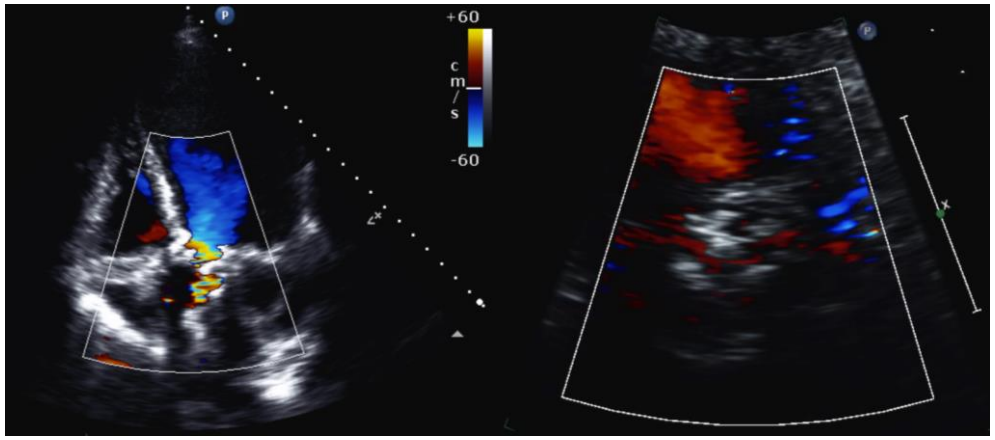
- 84 year-old woman
  - Cardiovascular risk factors: hypertension, dyslipidemia
  - Chronic kidney disease stage 3b
- Presented with decompensated heart failure with **depressed LVEF** due to
  - **Very severe aortic stenosis**
  - **Two-vessel coronary heart disease**



TTE:

- Aortic valve area +- 0,53 cm^2
- Mean transvalvular pressure gradient +- 58 mmHg
- LVEF +- 29%

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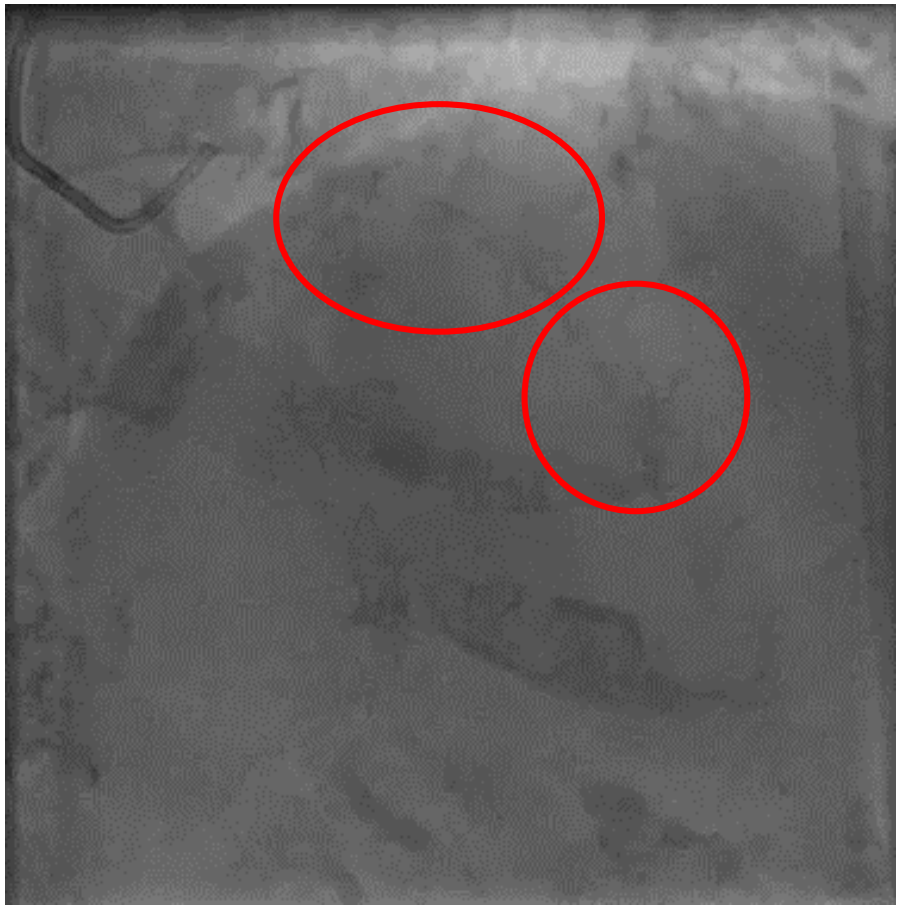

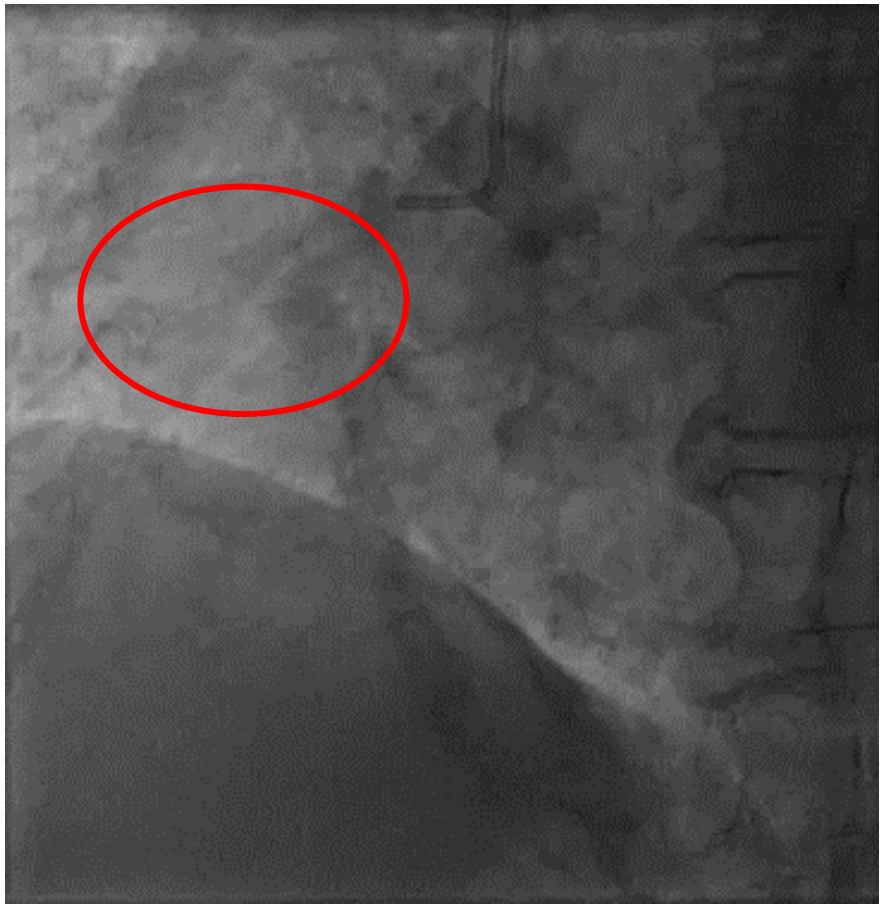

HEART TEAM: **TAVR + PCI of LAD and RCA**

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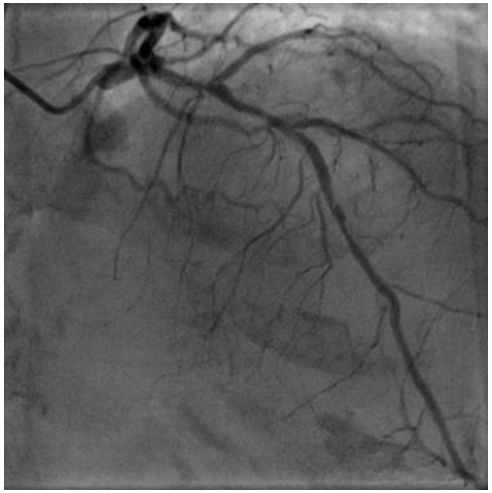
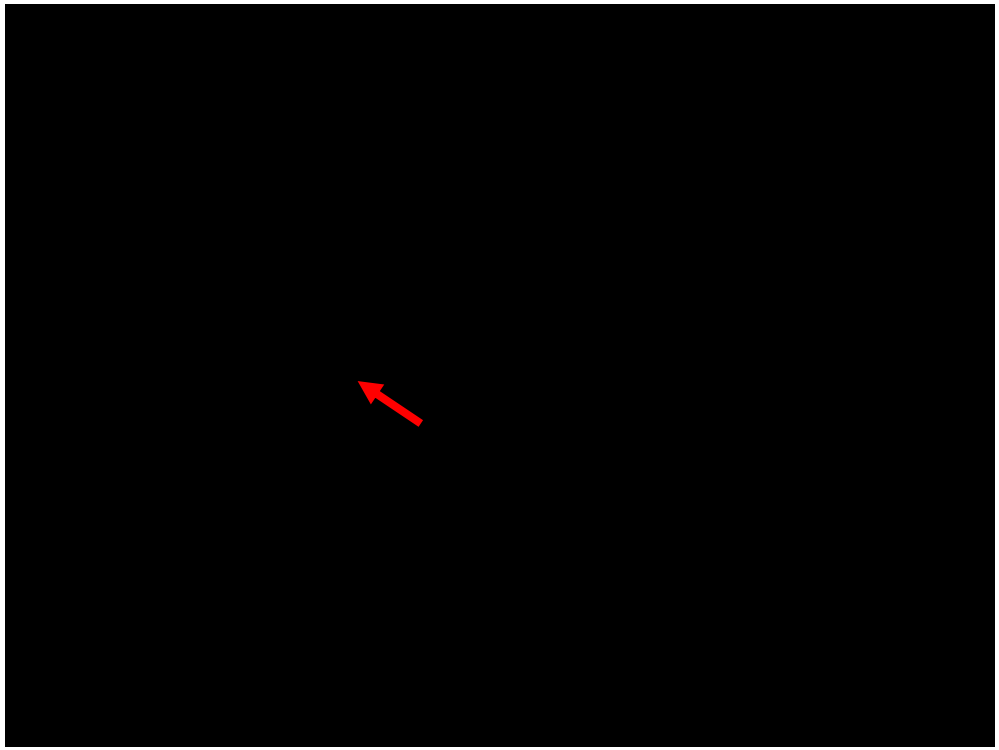
- TAVR: Edwards Sapien 3 Ultra 23mm, femoral access
- No apparent complications; discharged at day 3
- Admitted 2 weeks later for elective PCI of LAD …





? ?

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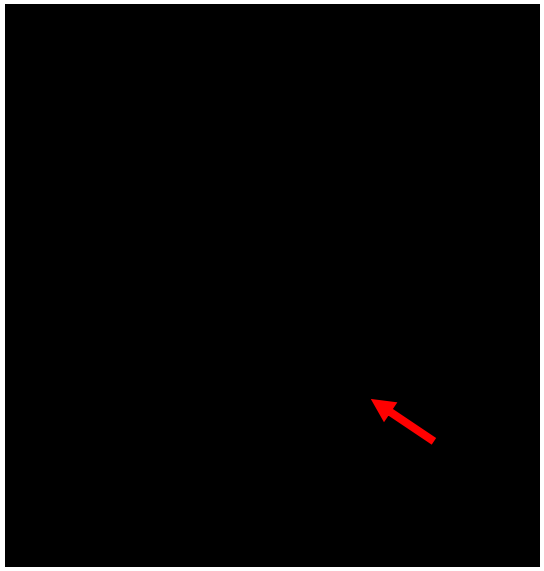
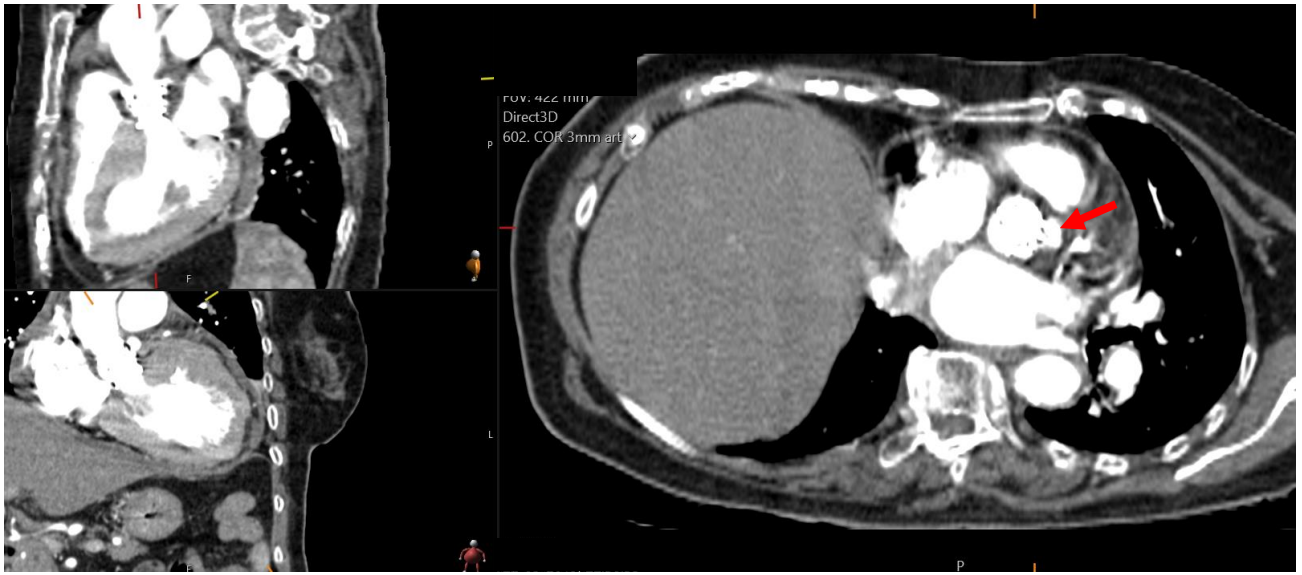
Turns out...

- Isolated episode of chest pain shortly after discharge
- Pleuritic pain in the 5 days prior to elective PCI; C-reactive protein elevation
- No signs of hemodynamic instability at admission; no signs of active bleeding





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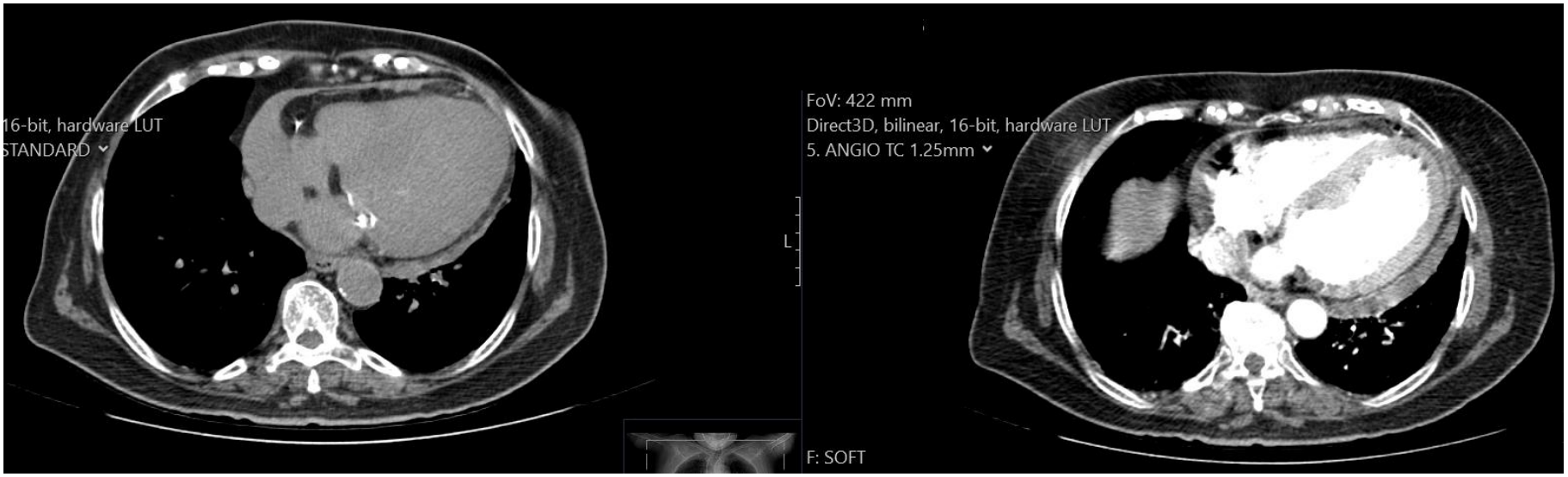

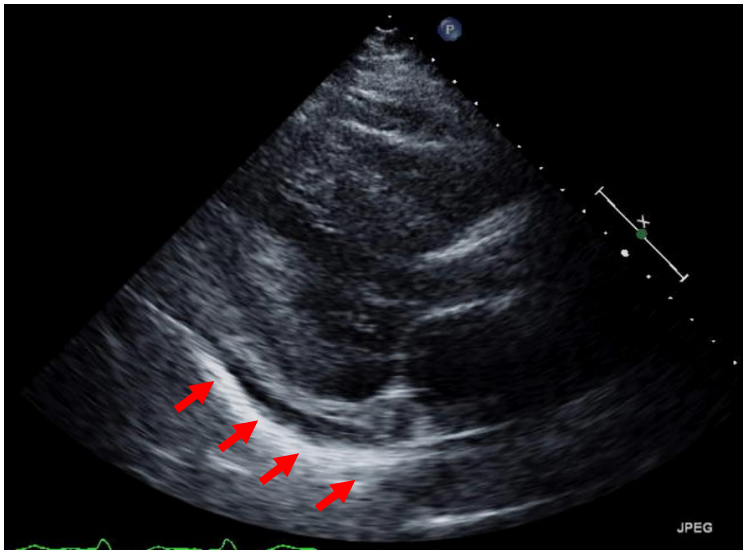

SELF-LIMITED AORTIC RUPTURE

COMPLICATED BY PSEUDOANEURYSM AND CARDIAC POST-INJURY SYNDROME

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What to do now?

- Repair of the lesion + Aortic valve surgery?
- Valve-in-valve TAVR?
- Percutaneous direct embolization?
- “Wait and see”?
- …

We’ve decided to “wait and see”

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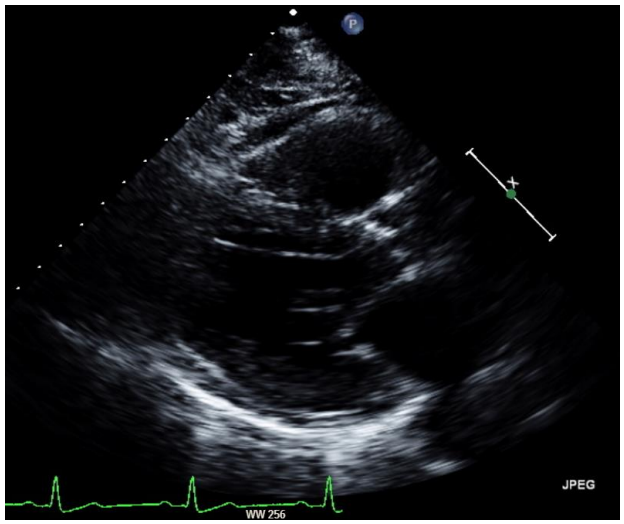
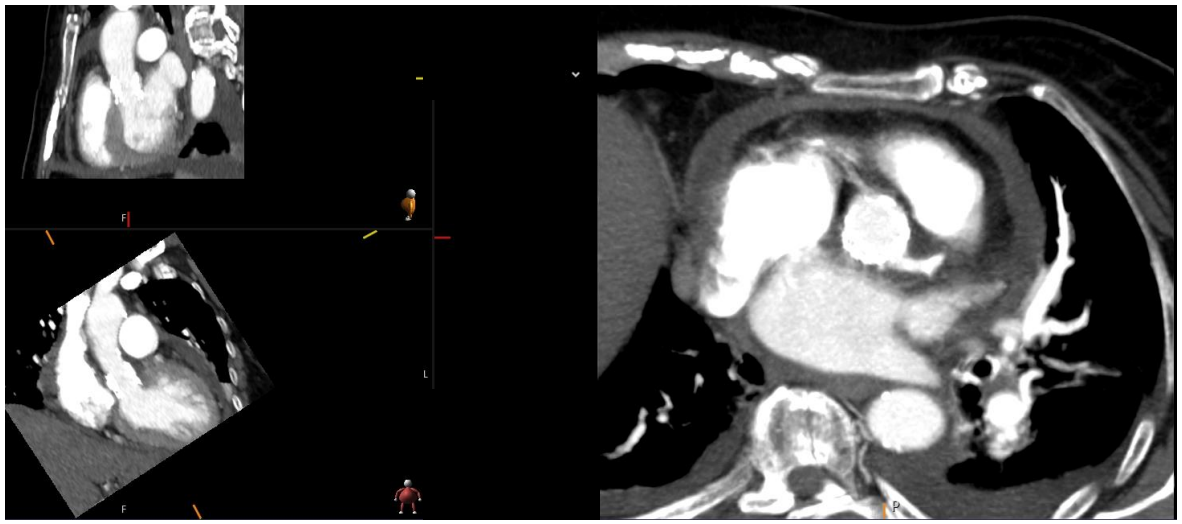
- Treated for post-cardiac injury syndrome and serial TTE monitoring
- Discharged at D62





- Pain and inflamatory markers resolution
- Mild pericardial effusion
- Complete resolution of CT angiography findings

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- Annular rupture is a rare (< 1% of cases) and potentially fatal complication of TAVR.
- Clinical presentation depends on the location and extent of the injury, ranging from assymptomatic to an immediate catastrophic event.
- Treatment options depends on the type of annular rupture and its clinical manifestations.
- It includes: conventional cardiac procedure, isolated pericardial drainage, and a conservative strategy.
- 30-day mortality for patients with annular rupture or tamponade is ≈ 50%.