TAVR in a Patient with Pure Aortic Regurgitation and History of Type A Aortic Dissection.

Case Presentation

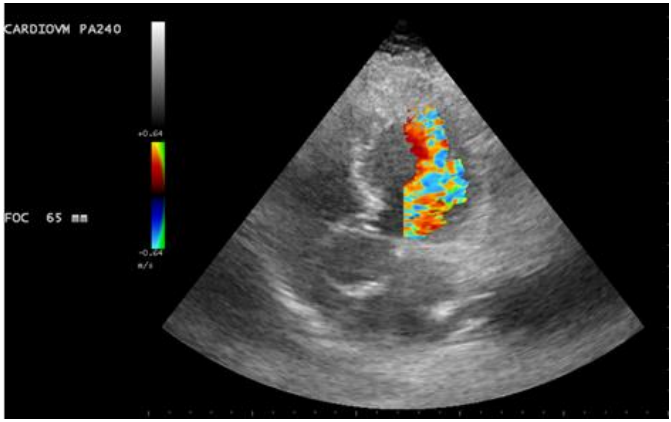
- 60-year-old female with a history of hypertension and COPD.
- 2014: Type A aortic dissection involving abdominal aorta. Treated with ascending aortic replacement with a non valvulated dacron prosthesis. Residual distal dissection up to the iliac level.
- 2020: She developed progressive dyspnea (NYHA III-IV) and was diagnosed with severe symptomatic aortic regurgitation.

Physical exam and diagnostic testing

- **Physical examination**

  BP 120/75 mmHg HR 75 bpm.
  Diastolic murmur at the lower sternal border.
  No clinical signs of heart failure.
  Weight 68 kg. Height 1.68 m. BMI 24.1 kg/m2.

- **ECG**: Sinus Rithm.
- **Lab**: Hb 12.9 gr/dl. Cr 1.08 mg/dl. eGFR 55 ml/min/1,73 m2.
- **TTE** EF 69%
  Tri-leafleat AV, mild sclerosis. Severe AR.
  Reverse holodiastolic flow in descending thoracic and abdominal aorta.
  sPAP 47 mmHg. Mild MR and TR.
- **Coronary Angiography**: No severe coronary stenosis.
- **Spirometry**: FVC 78%, FEV-1 50%, FEV1/FVC 63%, FEF25–75% 21%. Severe Pulmonar Obstruction.



Angio CT

Aortic Annulus

Perimeter:	72.7 mm
Perimeter Derived Ø:	23.1 mm
Area:	393.9 mm²
Area Derived Ø:	22.4 mm

LVOT

Perimeter:	80.9 mm
Perimeter Derived Ø:	25.7 mm
Area:	372.8 mm²
Area Derived Ø:	21.8 mm

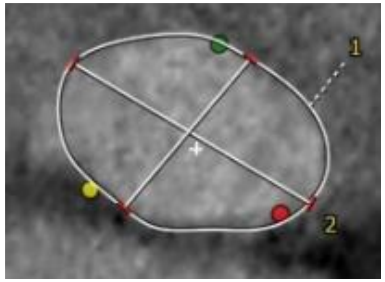
RCA Height: 18.2 mm

LCA Height: 9.5 mm

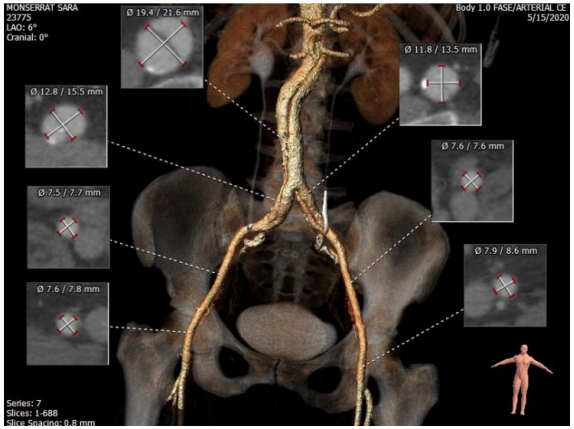
STJ Ø: 31.5 mm

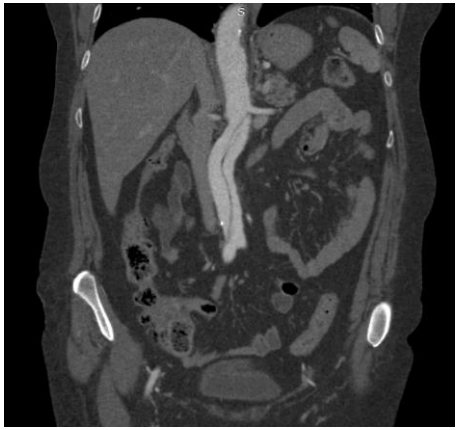
Sinus Of Valsalva:

Area:	947.2 mm²
Left:	34.5 mm
Right:	31.5 mm
Non:	34.1 mm



Aortic Valve Calcification: None
Aortic Annulus Angle: 56 °
Implant View: LAO: 28°, Caudal: 1°





Right Femoro-Iliac Axe:

CIA 14.6 mm, EIA 7 mm CFA 5.6 mm

Left Femoro-Iliac Axe:

CIA 14 mm, EIA 7.4 mm CFA 5.9 mm

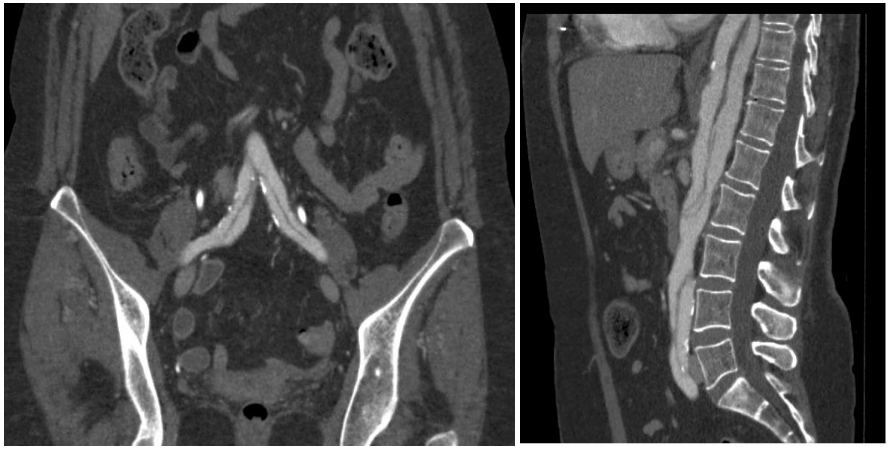
Risk Stratification:

- Euroscore II 7.95%
- STS 3.18%.

TAVR decision was made because of comorbidities and previous sternotomy.

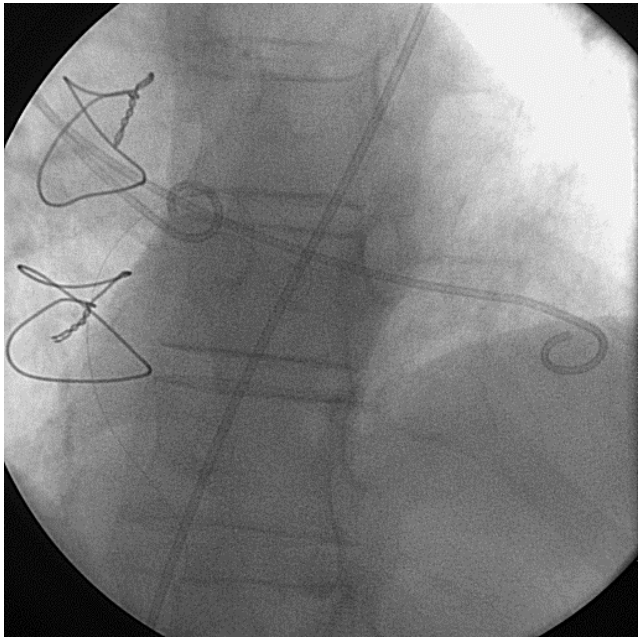
Technical Challenges

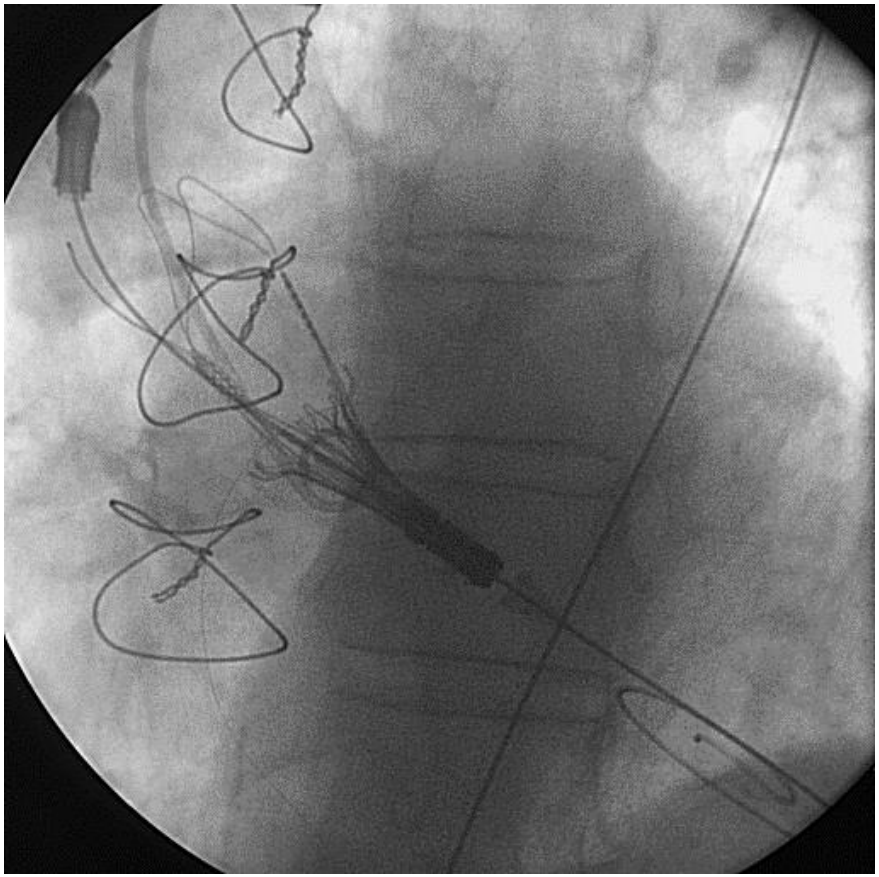
- No Annulus calcification.
- Chronic dissection with partially thrombosed false lumen and extension to both common iliac arteries.
- Angulation of the aortic graft.

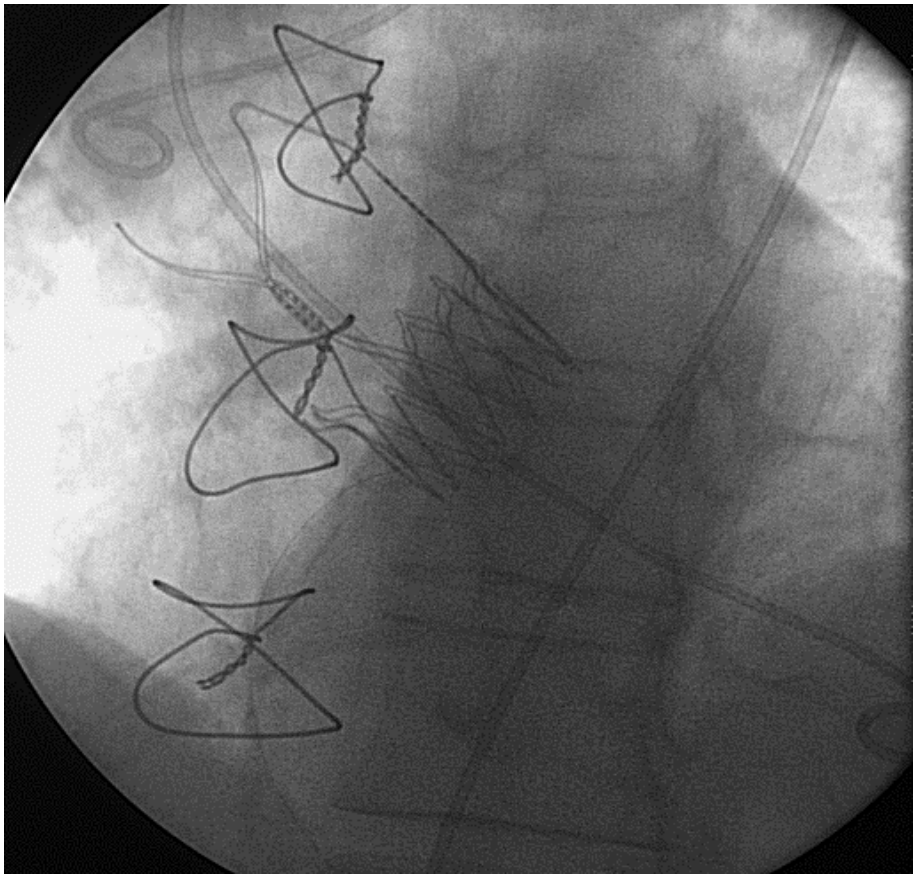


Procedure

- TAVR was performed under epidural anesthesia.
- Transfemoral approach (surgical dissection). 18 Fr Sheath (Lotus, Boston Scientific).
- Secondary access: right radial.
- Safari guidewire small (Boston Scientific).
- Accureate Neo size “L” valve (Boston Scientific).

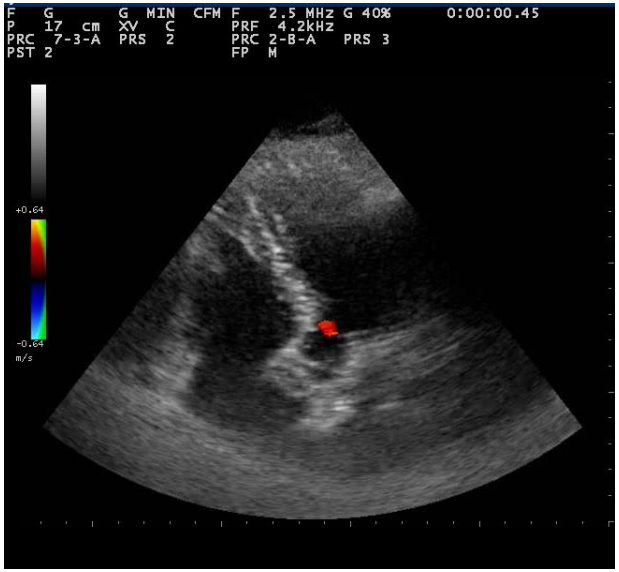


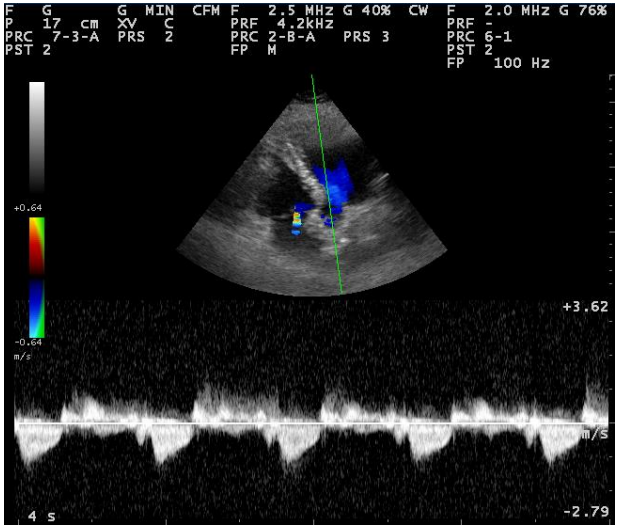




Post-Procedure

- No conduction disturbances during or after procedure.
- TTE post - TAVI: Normally functioning prosthesis. Mild AR. sPAP 37 mmHg.
- Good clinical post-procedure evolution.
- Patient was discharged at 48 hs.





Conclusions

- Use of TAVI in pure AR with mild calcification can be safely performed in selected cases.

- Accurate Neo prosthesis was effective for this procedure.

- Transfemoral TAVI can be performed in selected patients with chronic aortic dissection and a widely open true lumen.