

Un Caso, una enseñanza: TAVI en escenarios difíciles

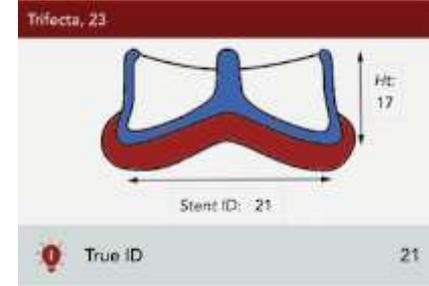
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Ex Presidente CACI; Ex Presidente SOLACI

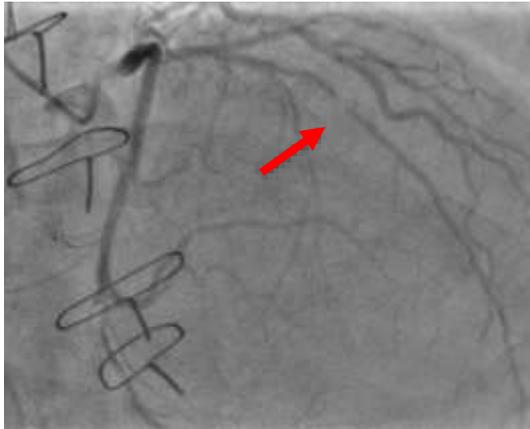
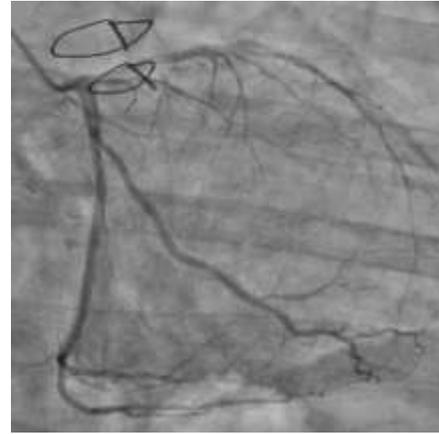
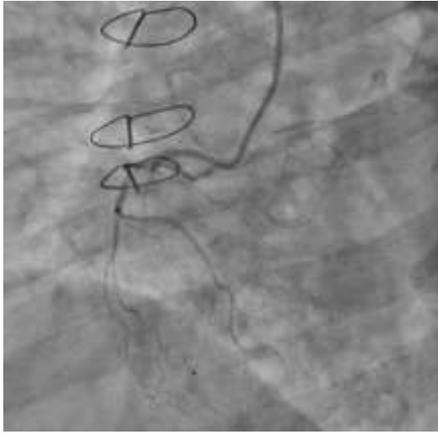
Case presentation

- 74 year-old male patient, hypertensive and diabetic on insulin.
- History of surgical aortic valve replacement in 2019 for severe aortic stenosis, with a 23mm biological prosthesis (St Jude, Trifecta)



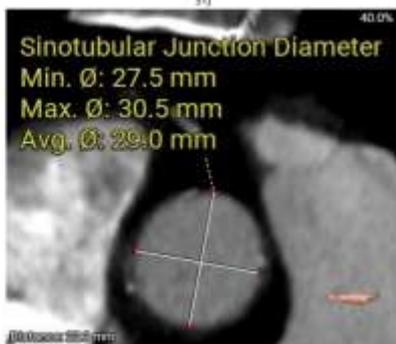
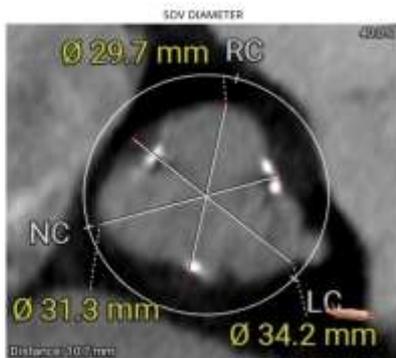
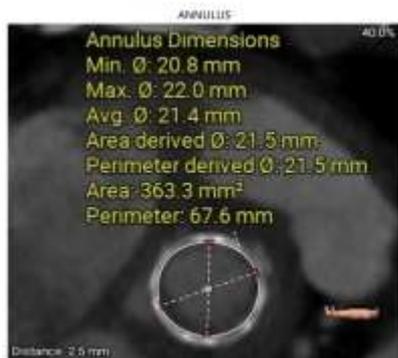
- Progressive dyspnea for the last 6 months; NYHA FC III
- TTE: Mild left ventricular dilatation; bioprosthesis dysfunction with severe insufficiency; preserved left ventricular function with an ejection fraction 65%; pulmonary pressure 37mmHg; moderate mitral insufficiency.
- Moderate renal impairment with a creatinine clearance 55ml/min
- Referred to our hospital for Heart Team evaluation.

Coronary angiography



Severe mid LAD lesion

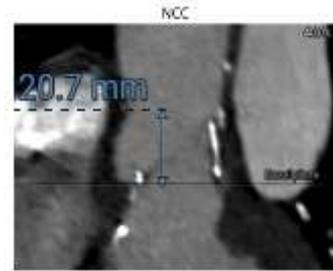
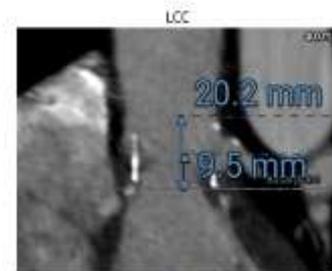
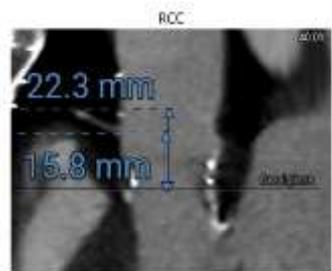
Multi slice CT evaluation



SAV frame to LCA is approx. 4.3 mm
 23 mm Trifecta = 23 mm manufacturer's outer diameter



SAV frame to RCA is approx. 5.7 mm
 23 mm Trifecta = 23 mm manufacturer's outer diameter



EuroSCORE II

Patient-related factors		Cardiac-related factors		EuroSCORE II	
age	74	CCS angina class 4	no	10.97 %	
biological sex	Male	LV function	good (LVEF > 50%)		
chronic lung disease	no	recent MI	no	<p>Based on the information you have provided... if 100 people with a similar condition had a similar operation, 10 to 11 may be expect to die, whereas 89 to 90 would be expected to survive. Your EuroSCORE is 10.97.</p> <p>reset</p>	
extracardiac arteriopathy	no	pulmonary hypertension	moderate (PA systolic 31-55)		
poor mobility	no	NYHA class	III		
previous cardiac surgery	yes	Operation-related factors			
active endocarditis	no	surgery on thoracic aorta	no		
critical preoperative state	no	urgency of operation	elective		
renal impairment	moderate (CC 50-85 ml/min)	weight of operation	2 procedures		
creatinine clearance					
diabetes on insulin	yes				

Heart team decision was PCI to left anterior descending, in a first stage, and transfemoral TAVI with a 26mm self expanding valve in a second stage, under local anesthsya and conscious sedation. Valve deployment with commissural alignment. Based on multi slice CT evaluation, it was not considered necessary to protect the left main.

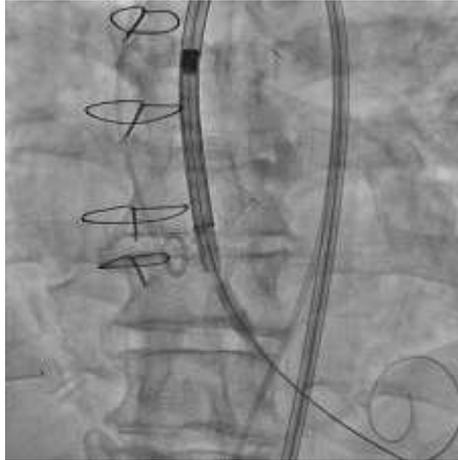
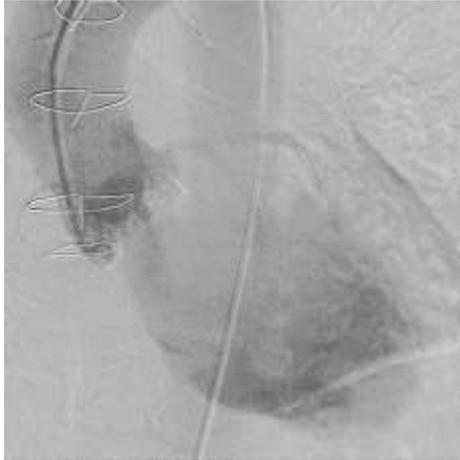
VIV Procedure



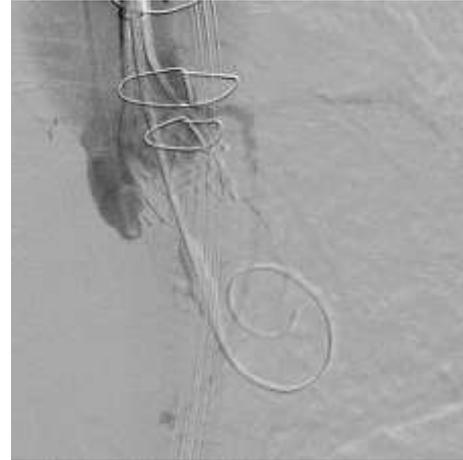
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TAVI Valve in valve procedure

26mm Self expanding valve



Preserved flow to left main during deployment



TAVI Valve in valve procedure



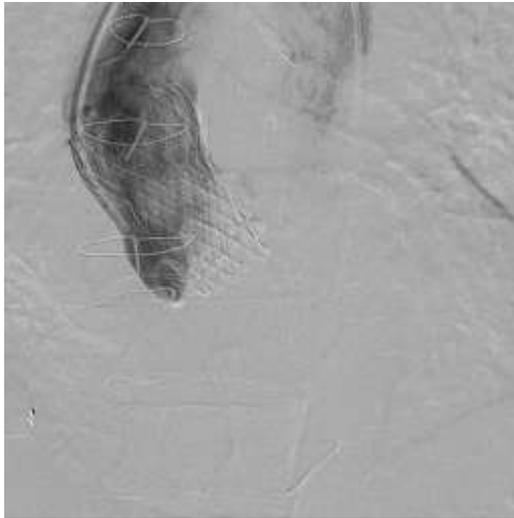
TAVI Valve in valve procedure



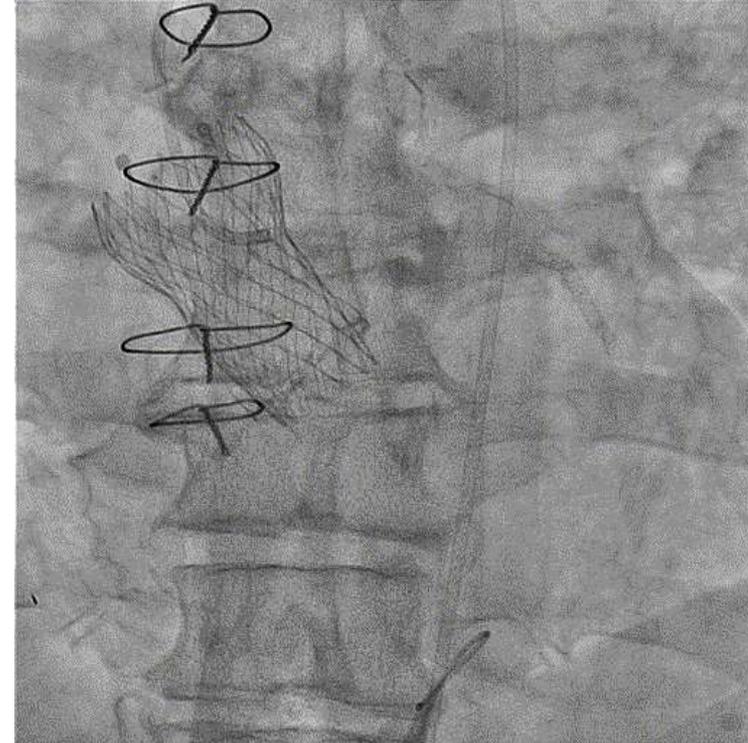
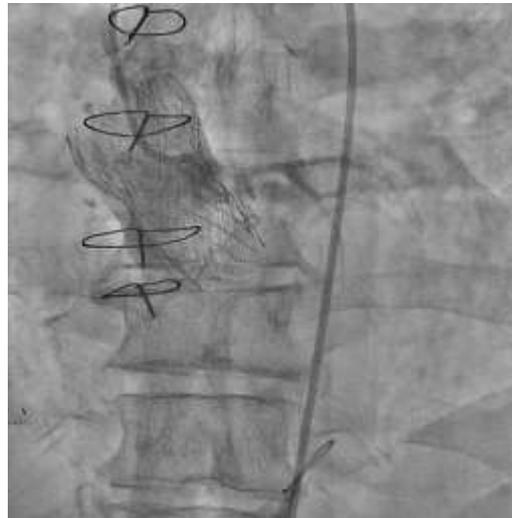
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TAVI Valve in valve procedure

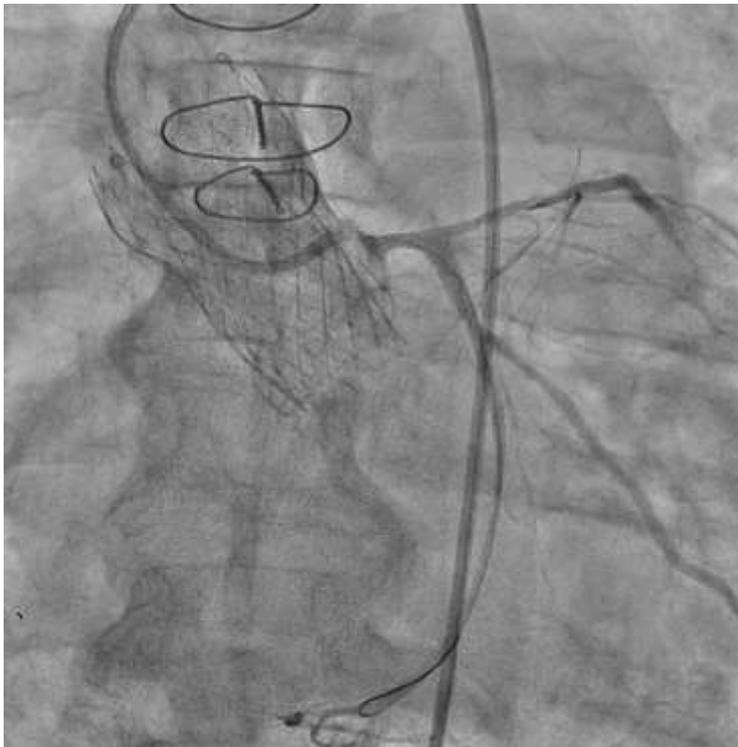
After valve deployment, severe compromised of flow to the left main and hemodynamic collapse.



JL4 from the left femoral access

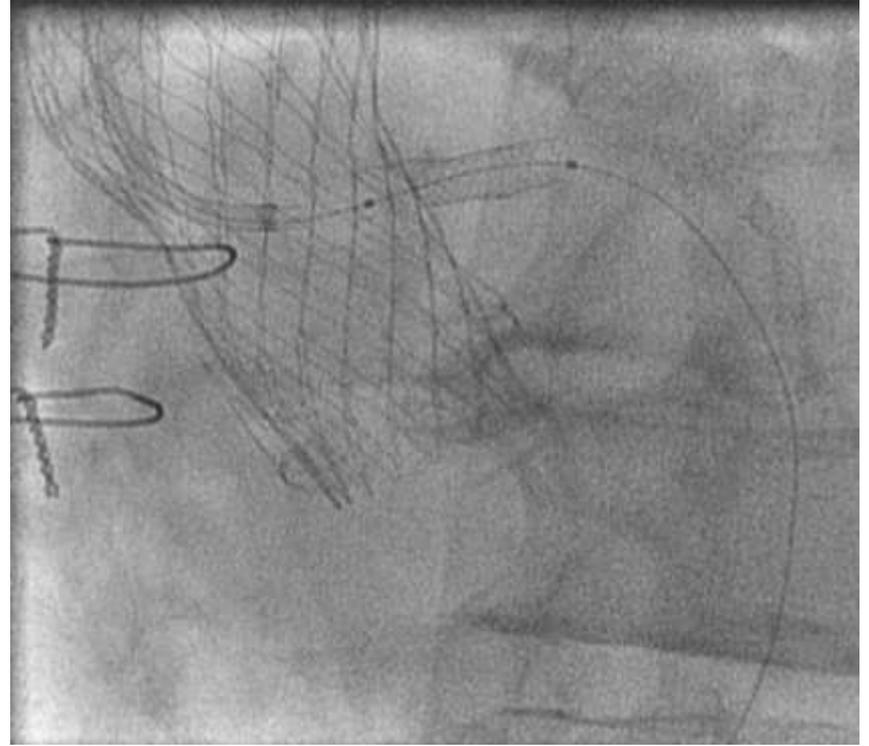


TAVI Valve in valve procedure – Rescue Left Main PCI

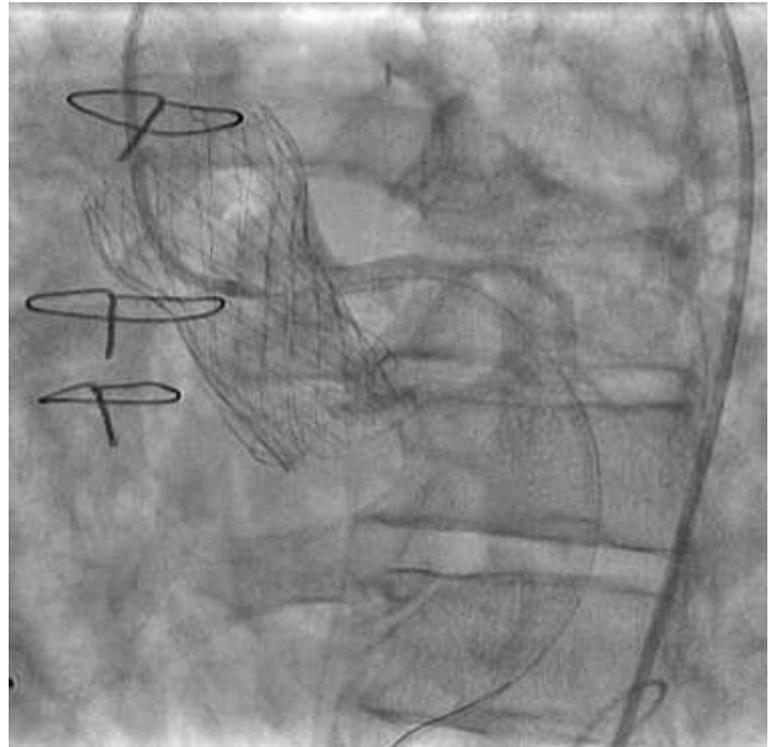
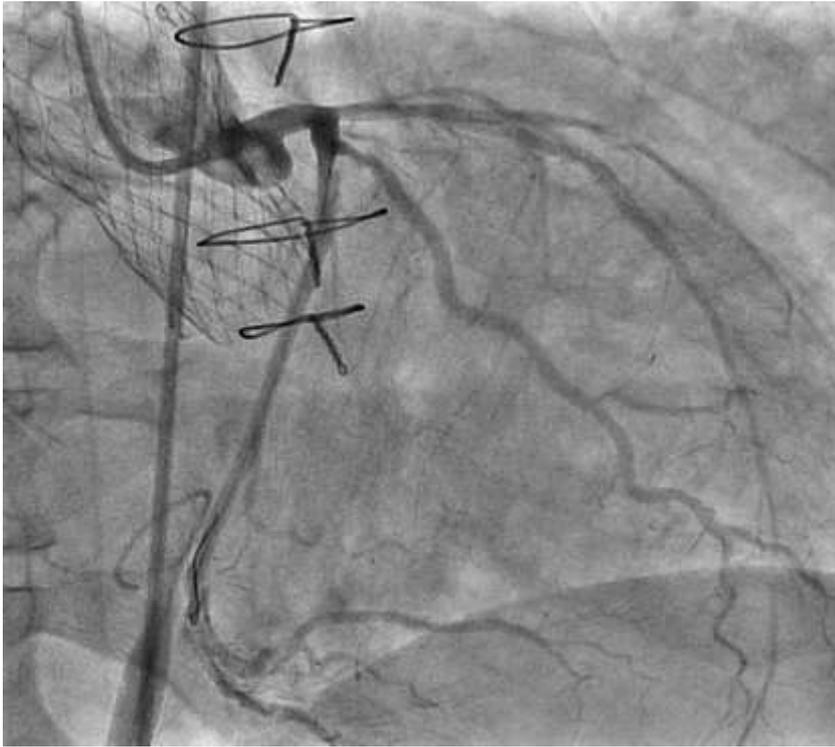


After wire passage immediate flow and clinical improvement was observed.

Rescue PCI of the left main



Rescue PCI of the left main



Clinical evolution

- In hospital outcome was uneventful, and TTE showed a mean gradient of 5mmHG and trivial paravalvular leak.
- Patient was discharged at 48 hours.
- Several anatomic, procedural, and valve related predictors of coronary obstruction have been described during valve in valve TAVI.
- In this particular case, we speculate that the low lying left main ostium and externally mounted surgical bioprosthesis leaflet displacement, were the reasons for left main obstruction.
- A lower threshold for coronary protection during valve in valve TAVI should be considered.