

Suicide Left Ventricle after TAVI

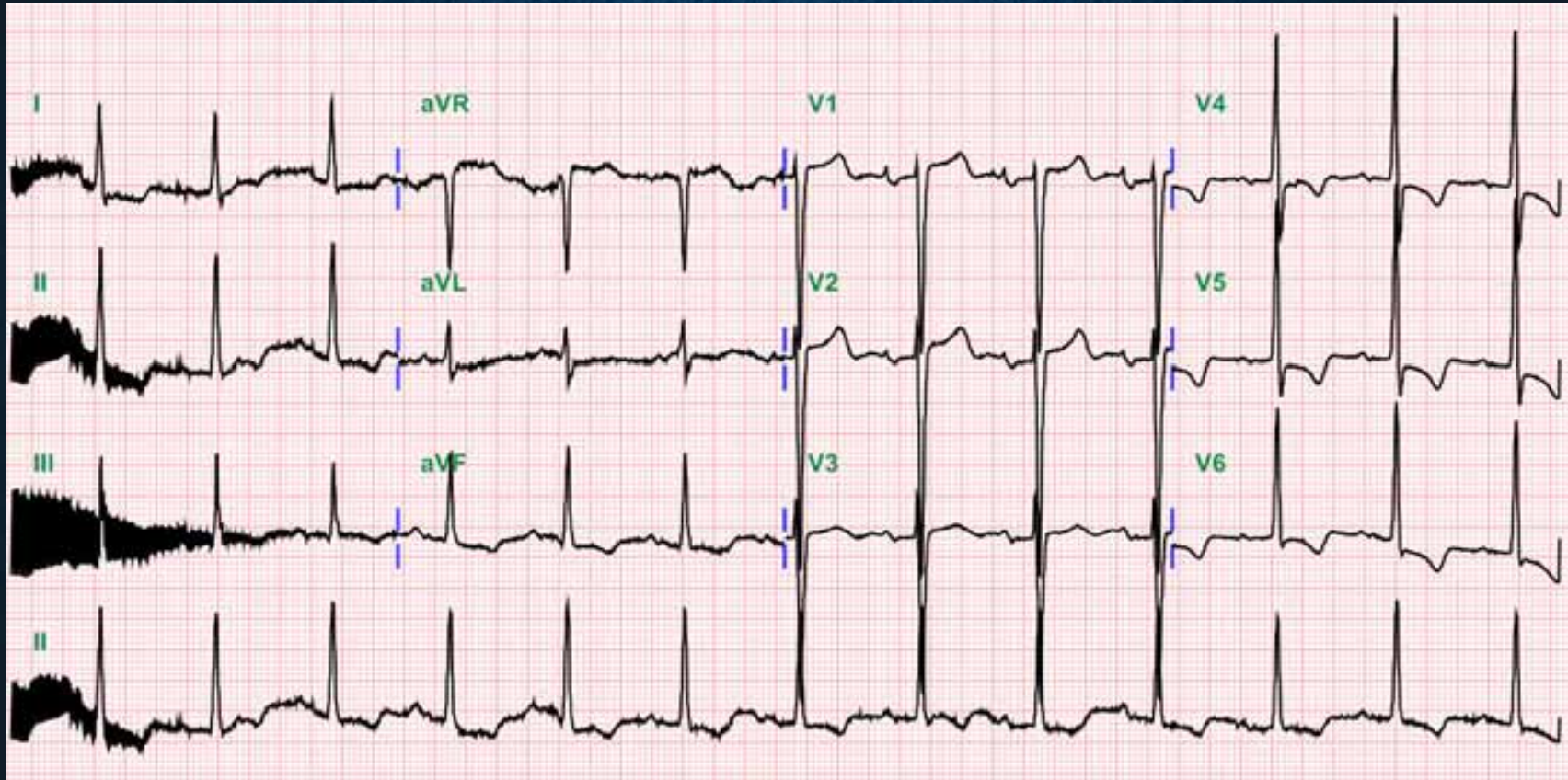
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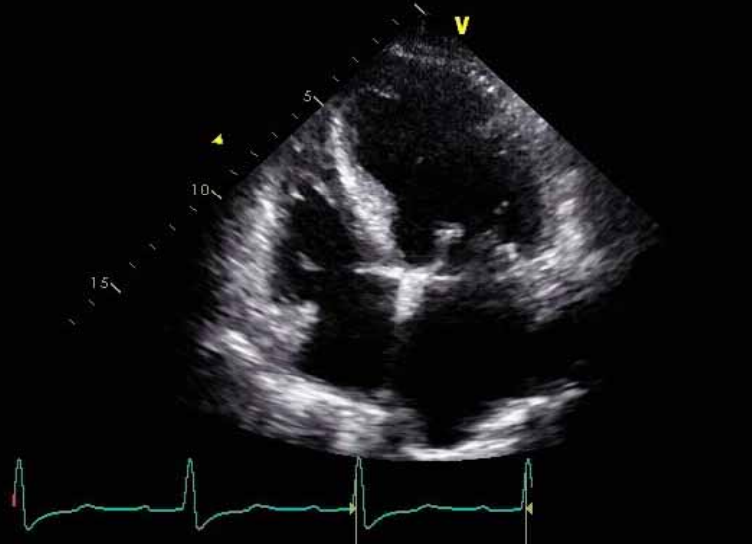
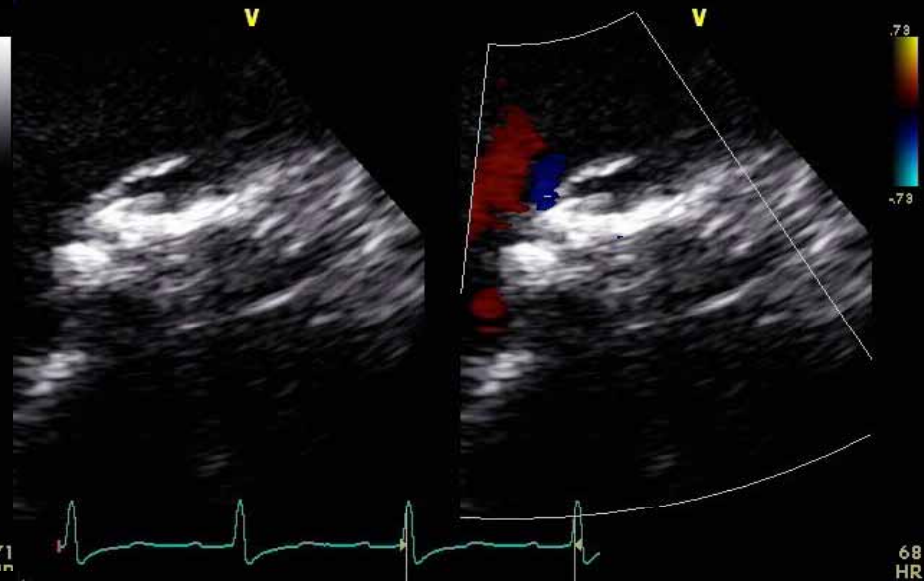
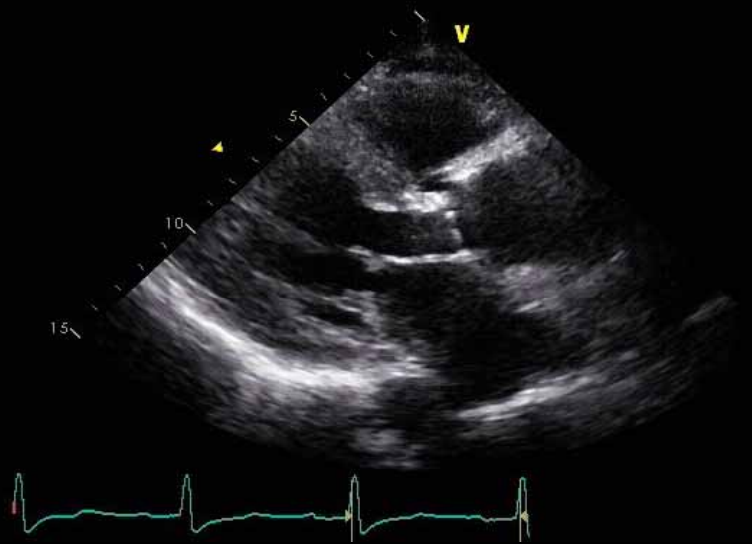
Patient information

- **80/F**
- **Chief Complaint : NYHA III dyspnea**
- **Past history**
 - Diabetes**
 - Hypertension**

Electrocardiography

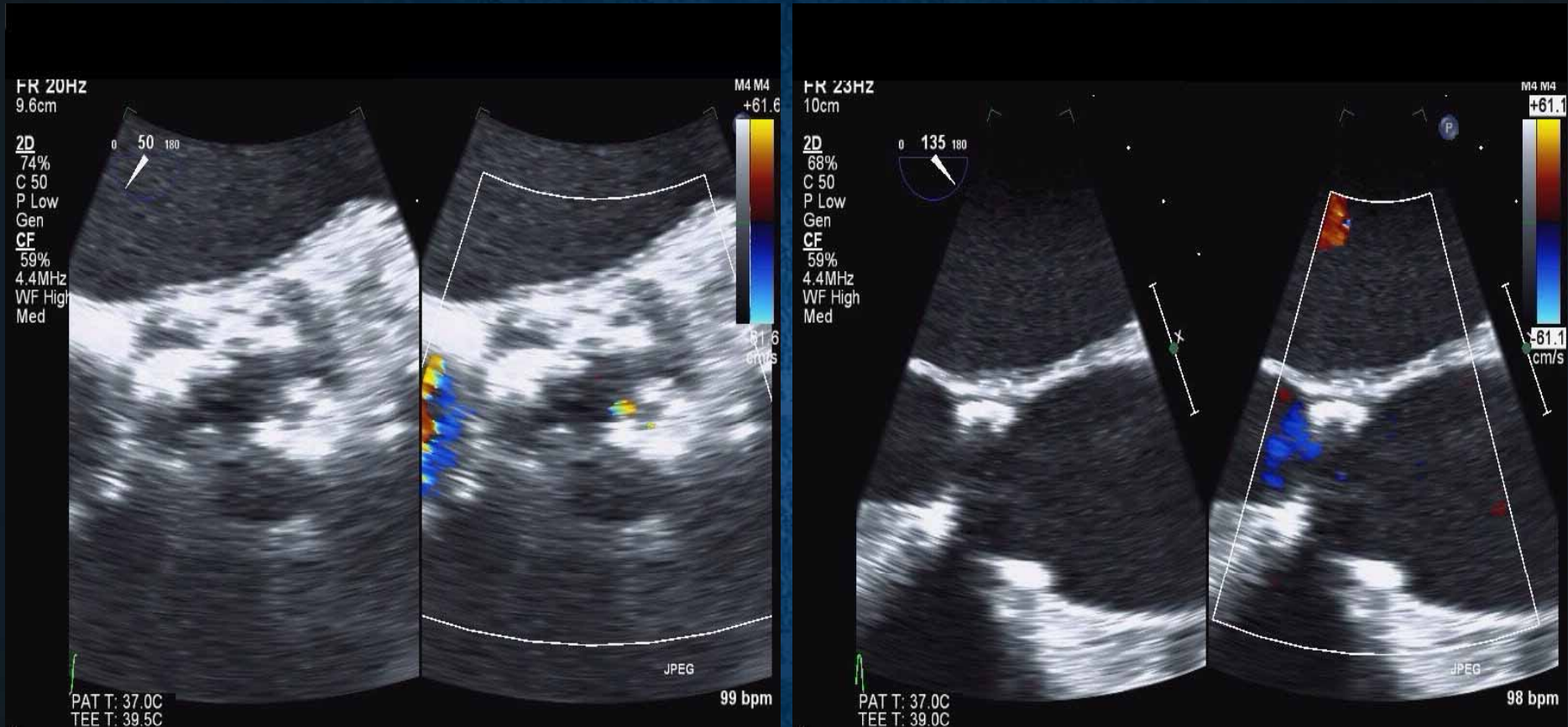


Transthoracic echocardiogram



EF	50 %	AVA by 2D	0.46 cm ²
IVSd	15.3 mm	AVA by CE	0.3 cm ²
PWd	12.4 mm	AV peak PG	84.7 mmHg
LVEDD	50.9 mm	AV mean PG	55.2 mmHg
LVESD	38.2 mm	V max	5.9 m/s
RVSP	50 mmHg		

Transesophageal echocardiogram



Logistic EuroSCORE : 28.89 %

STS score : 12.512 %

—————> **Decide to perform TAVI**

Computed Tomogram and annulus size



Annulus Size

- By TEE: 19.7 mm
- By CT: 21.7 mm

Distance from aortic root to coronary orifice

- LM: 11.7 mm
- RCA: 12.9 mm

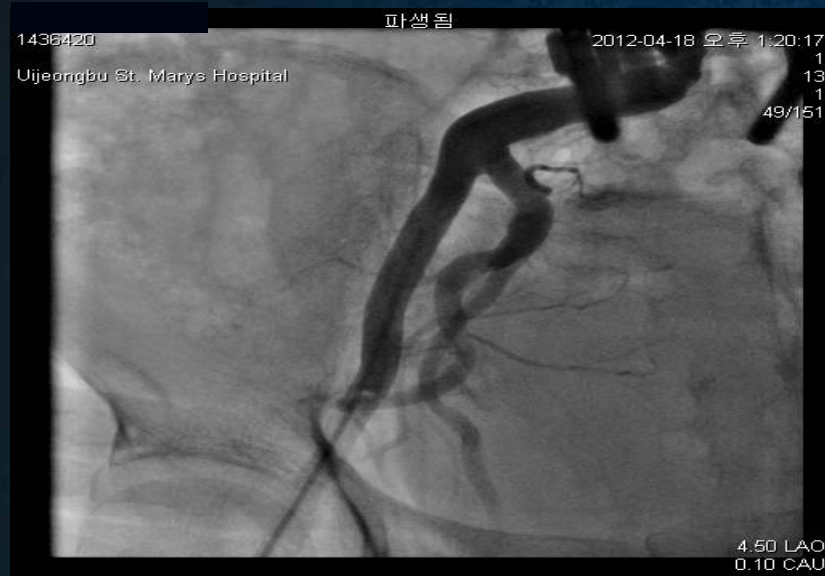
Valve size

: 23 mm Edward Sapien

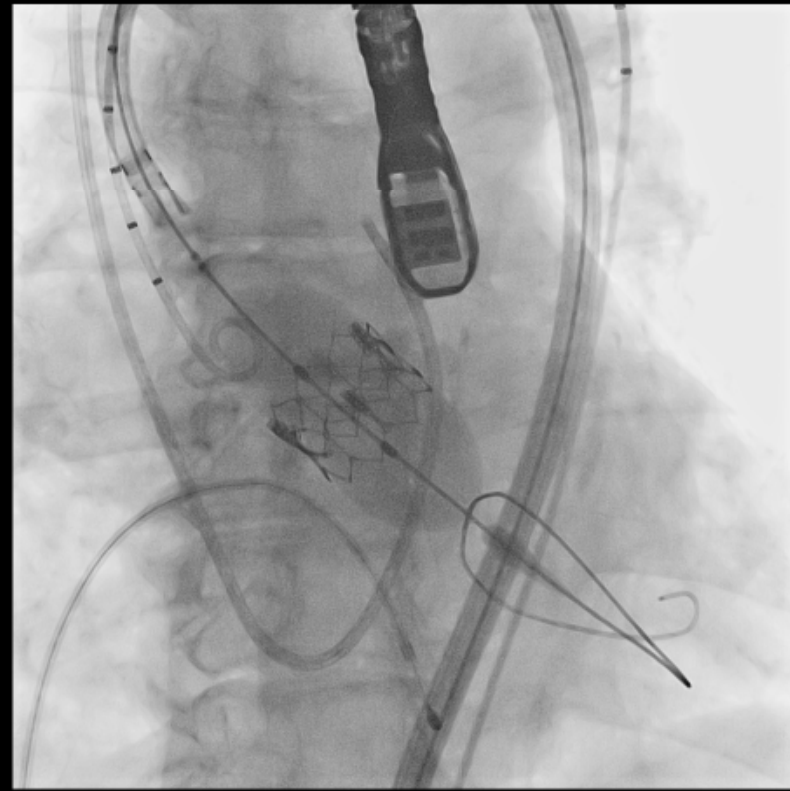
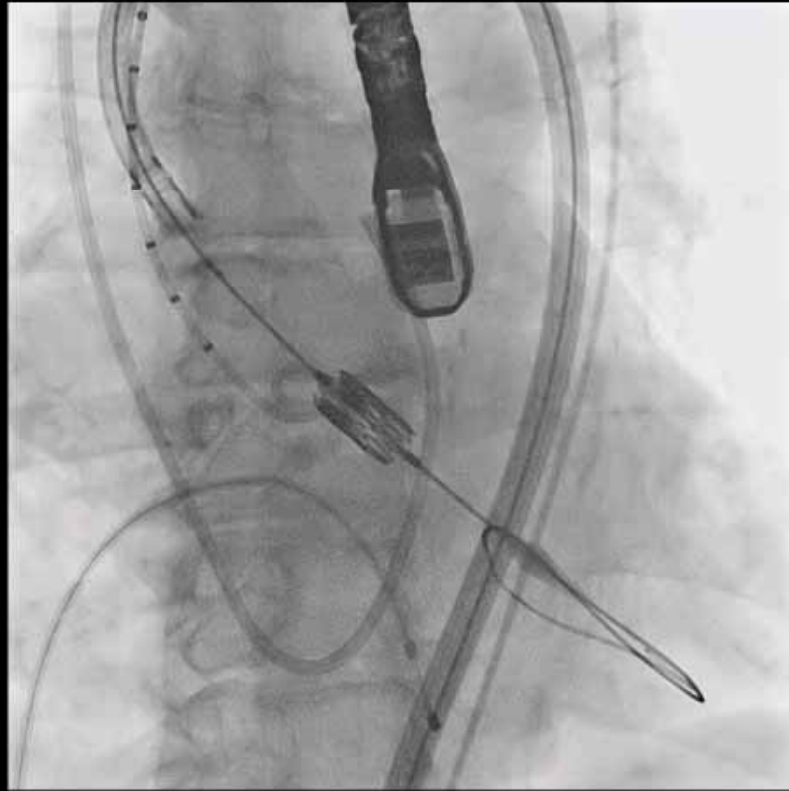
Coronary angiogram



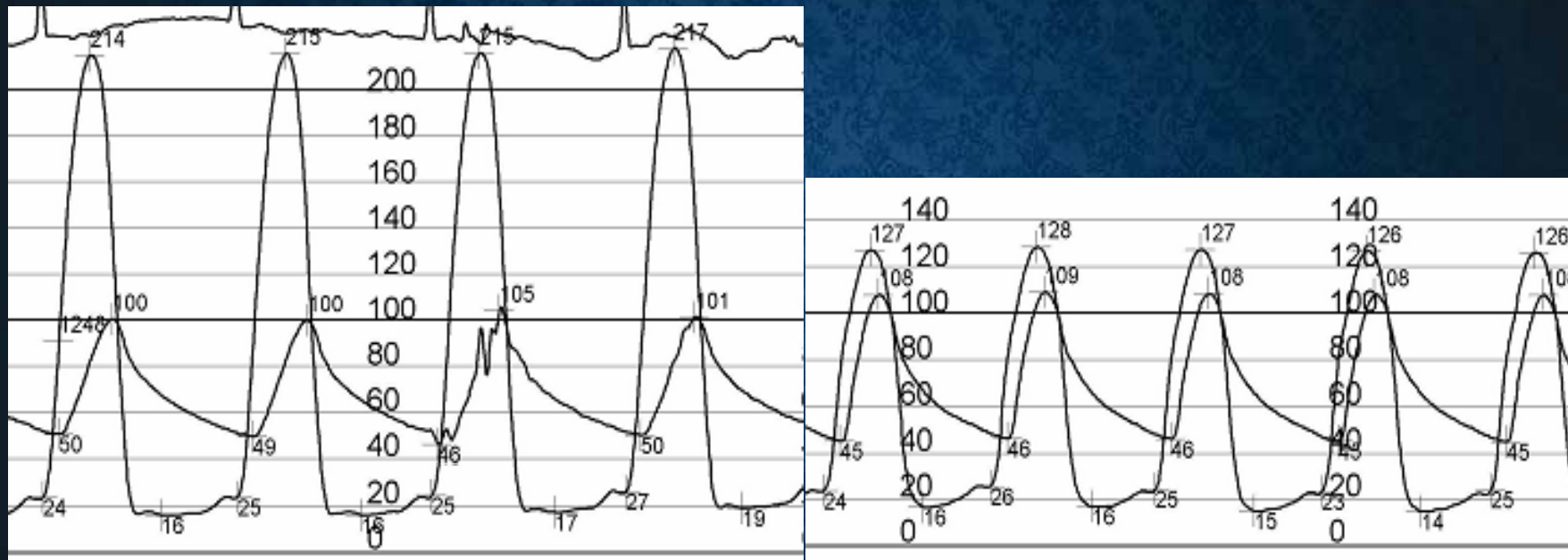
Femoral angiogram → TF approach



Transcatheter Aortic Valve Implantation



Pressure gradient

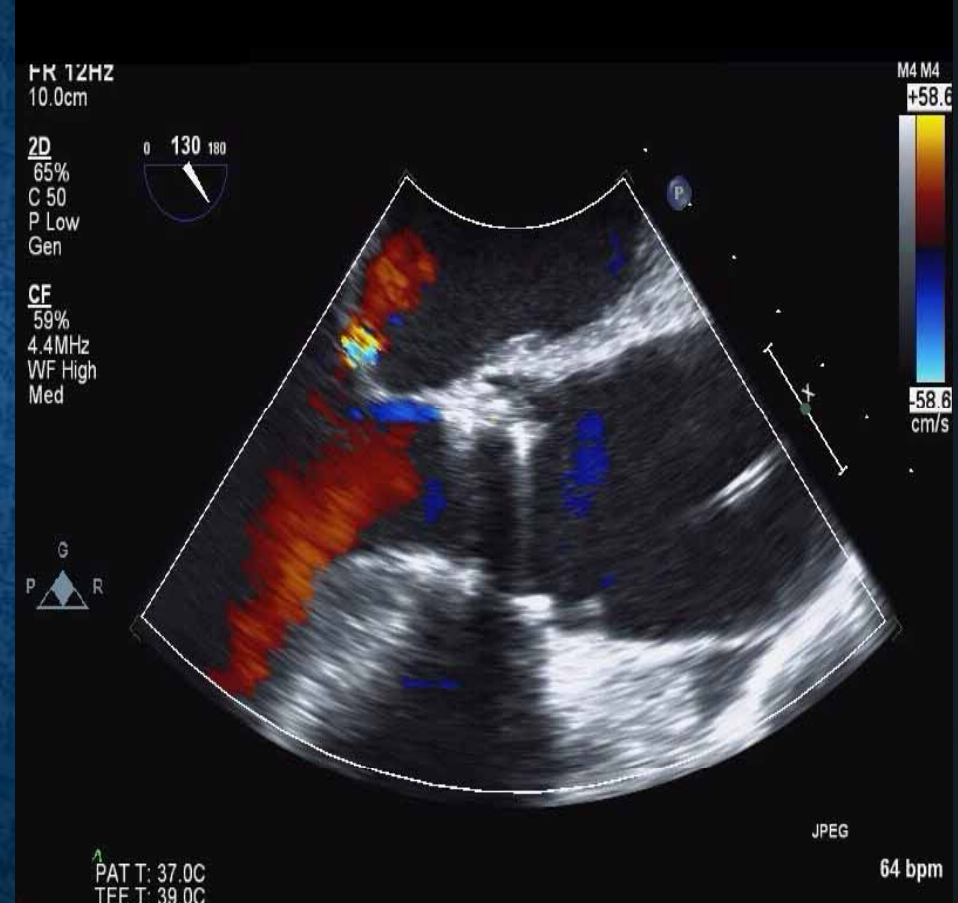
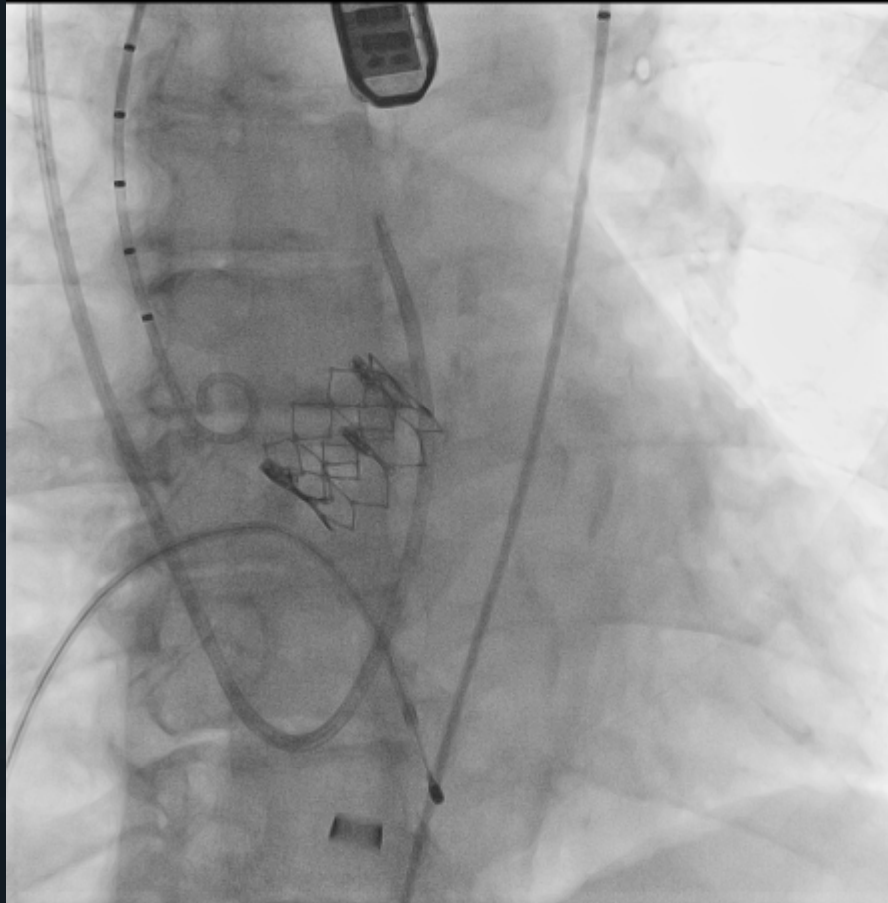


Before TAVI

After TAVI

Peak to peak PG : 115 mmHg → 20 mmHg

Aortogram and TEE after TAVI



8 Hours after TAVI

CPR for 10 min due to PEA

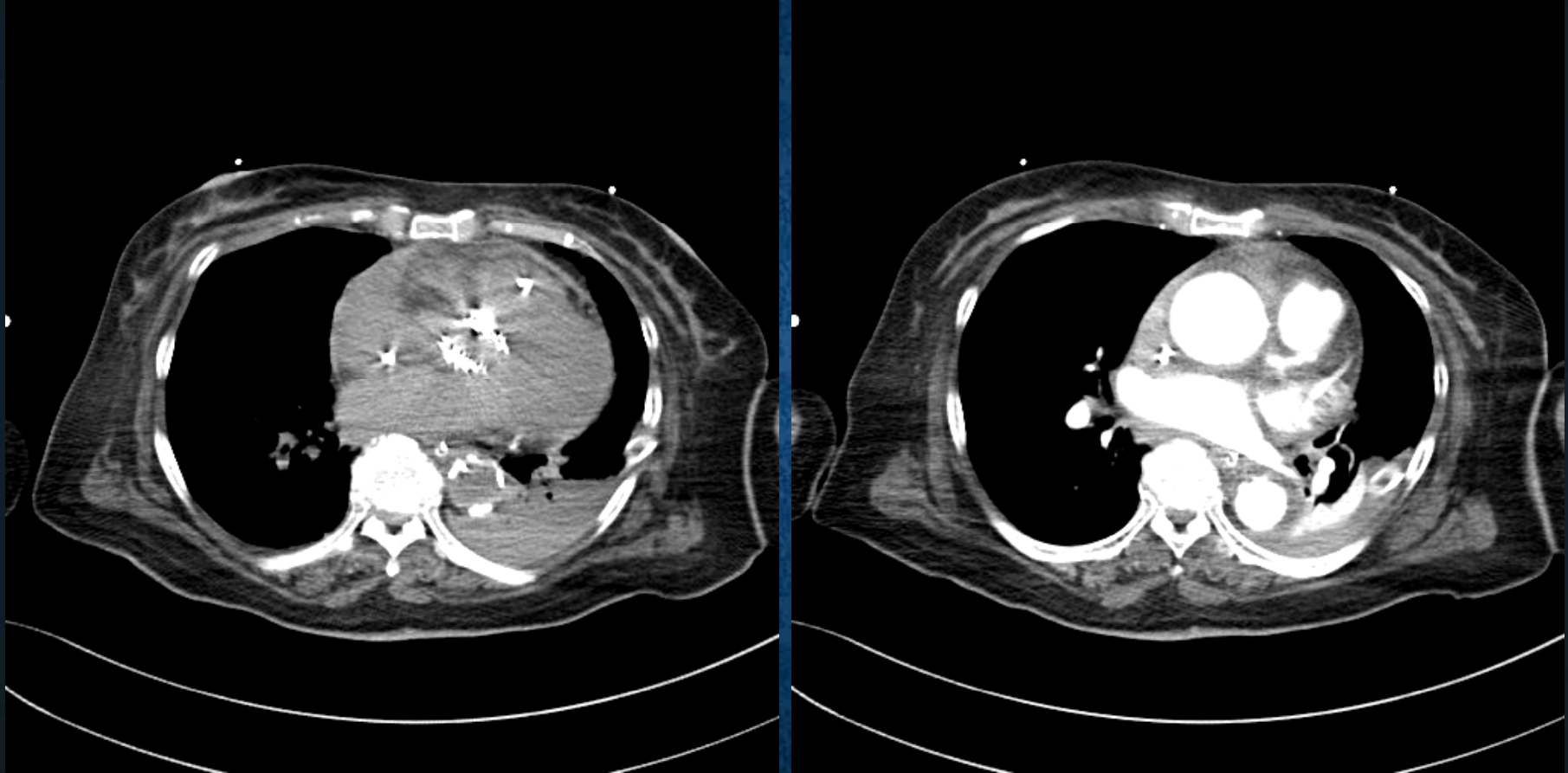
- **Hydration**
- **Inotropics: dopamin, norepinephrine**
- **IABP apply**
- **ECMO apply**
- **CRRT apply**

Shock state after TAVI

Considerable situations

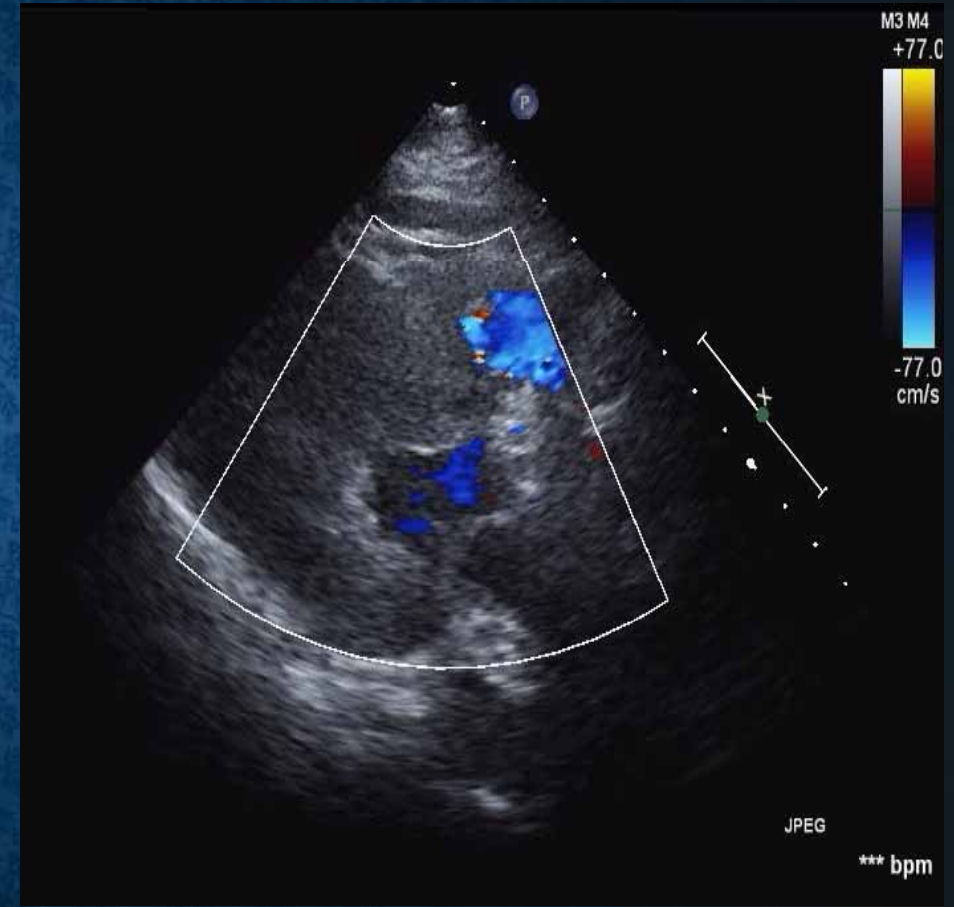
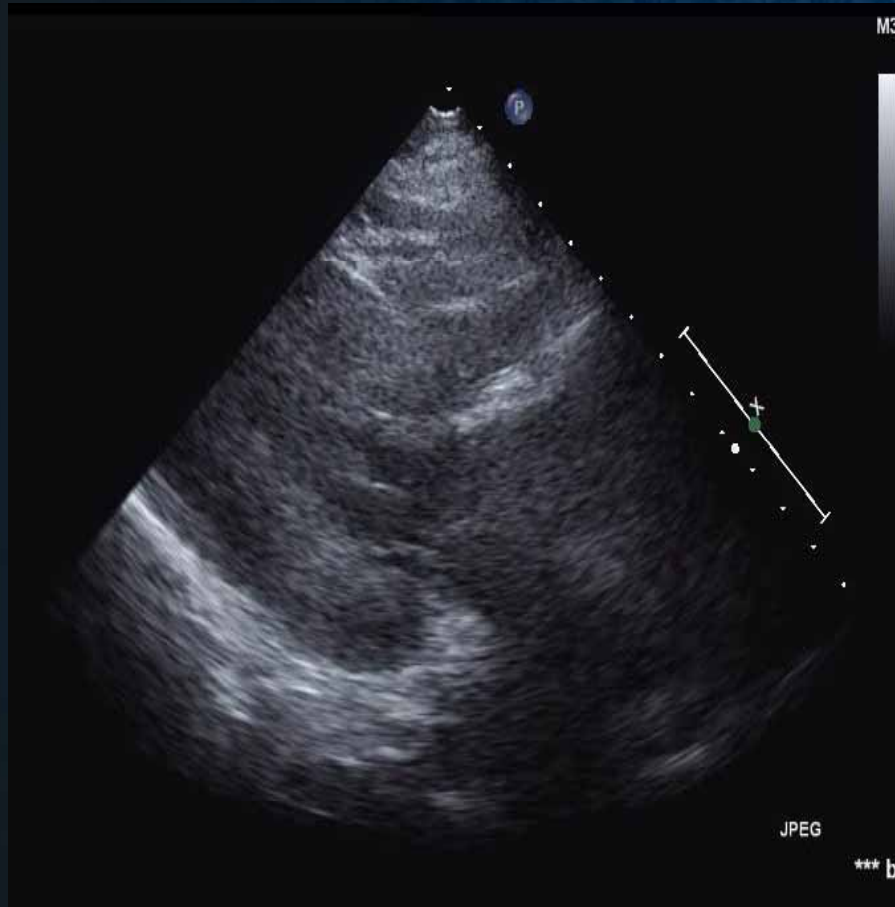
- **Annulus or aortic rupture**
- **Coronary obstruction**
- **Cardiac tamponade**
- **Aortic dissection**
- **Deteriorate paravalvular leak**

Aorta CT



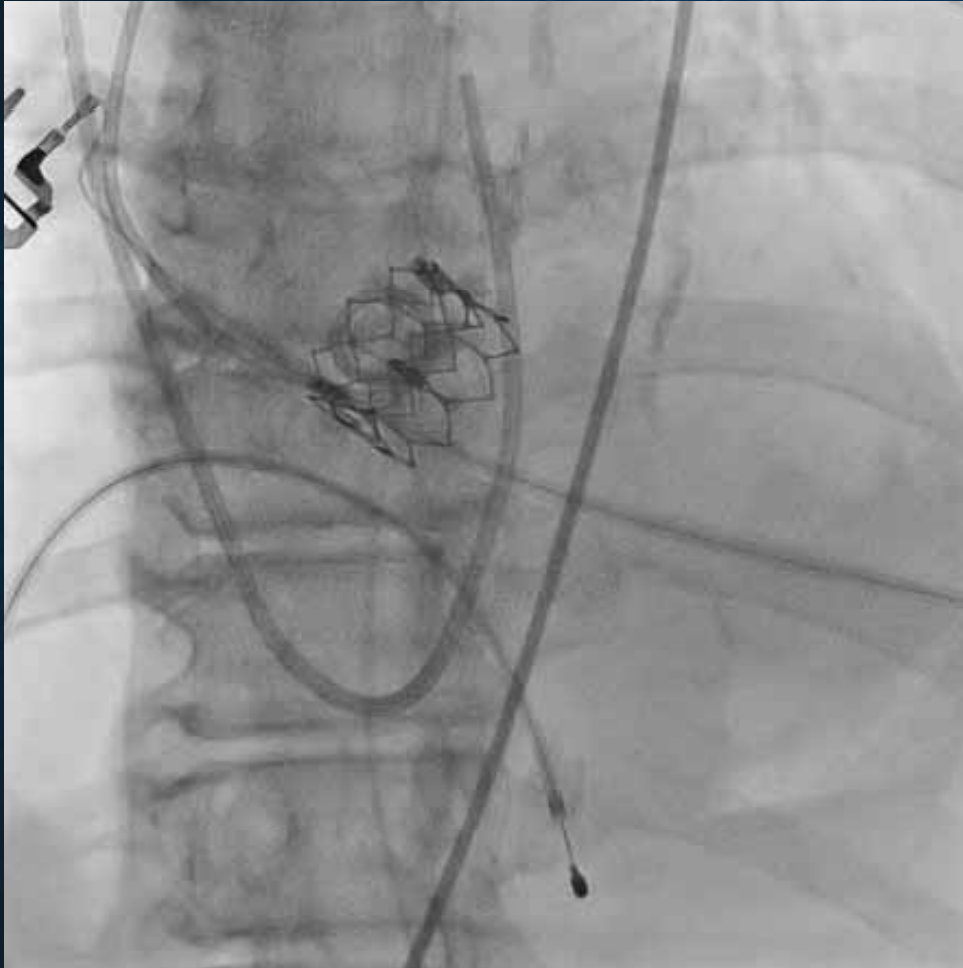
No aortic dissection or rupture

Transthoracic echocardiogram



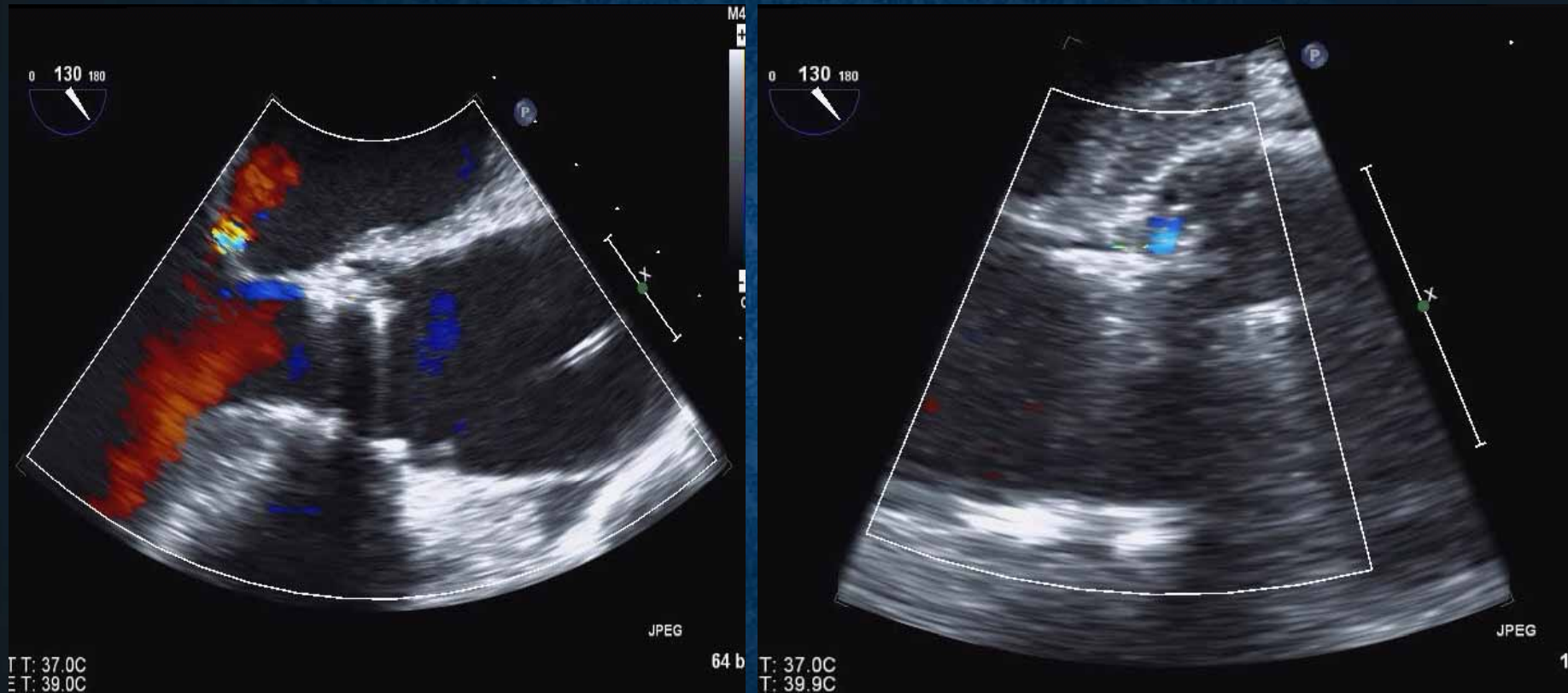
No cardiac tamponade or annulus rupture

Aortogram



No coronary obstruction

Transesophageal echocardiogram



No deteriorating paravalvular leak

What is the cause of cardiogenic shock ?

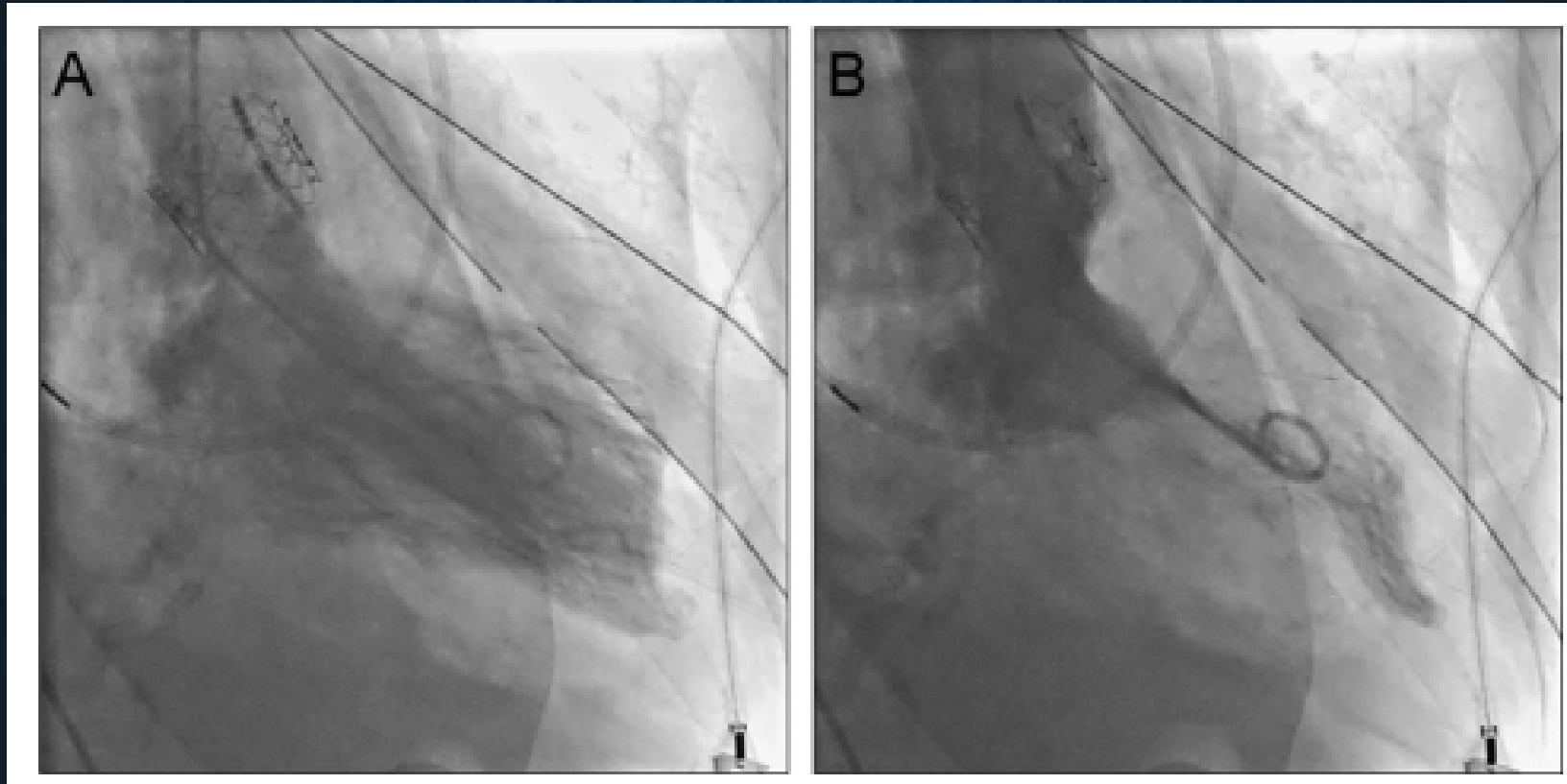
Catheterization and Cardiovascular Interventions 76:616–620 (2010)

Case Report

Suicide Left Ventricle Following Transcatheter Aortic Valve Implantation

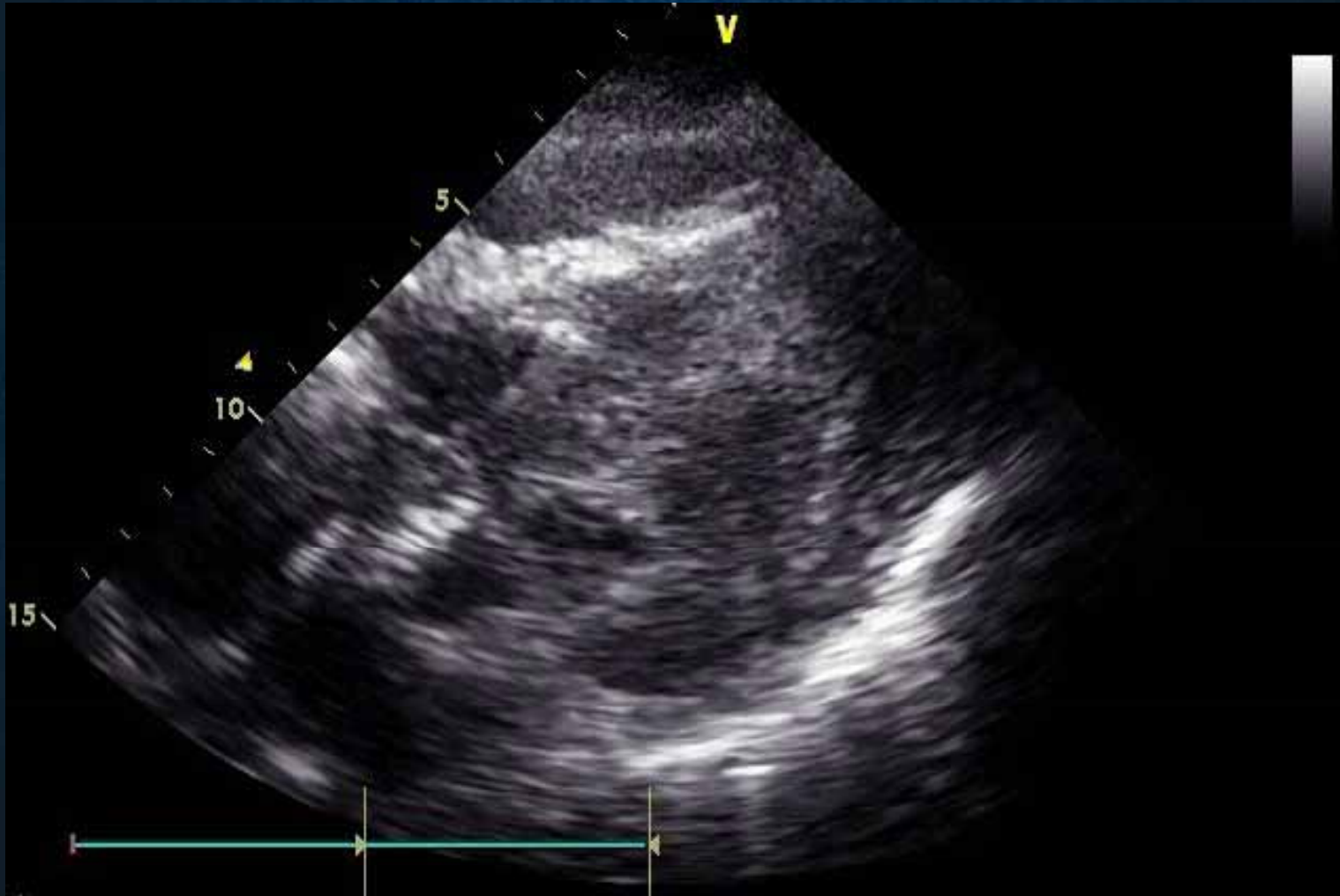
William M. Suh, MD, Christian F. Witzke, MD, and Igor F. Palacios,* MD

Left ventriculography in RAO

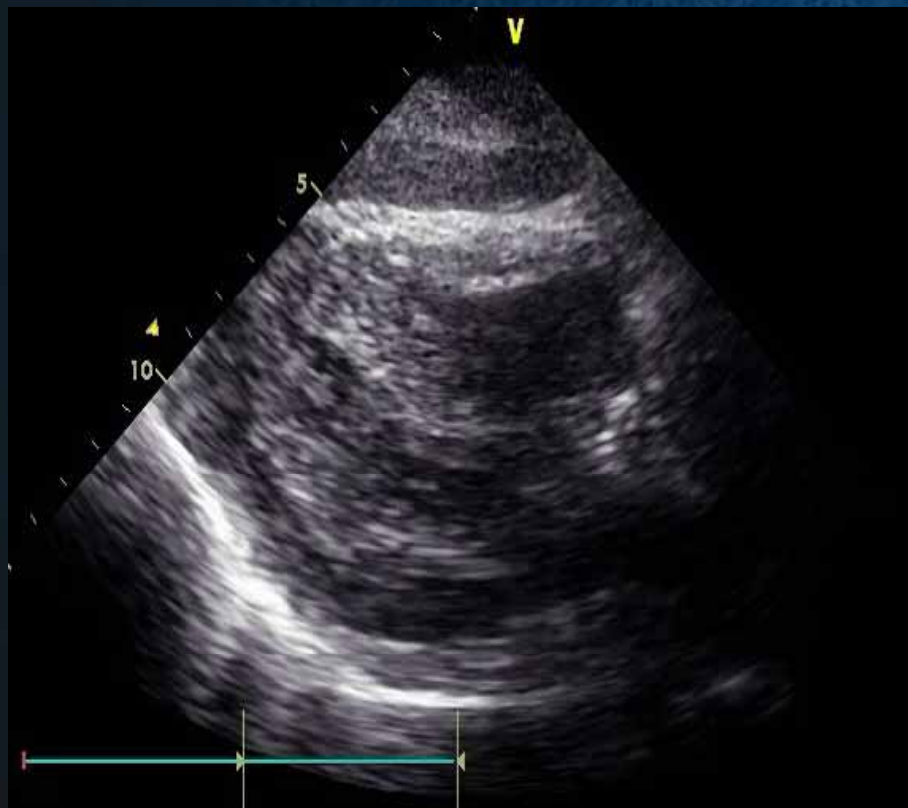


Catheter Cardiovasc Interv 2010;76:616-20

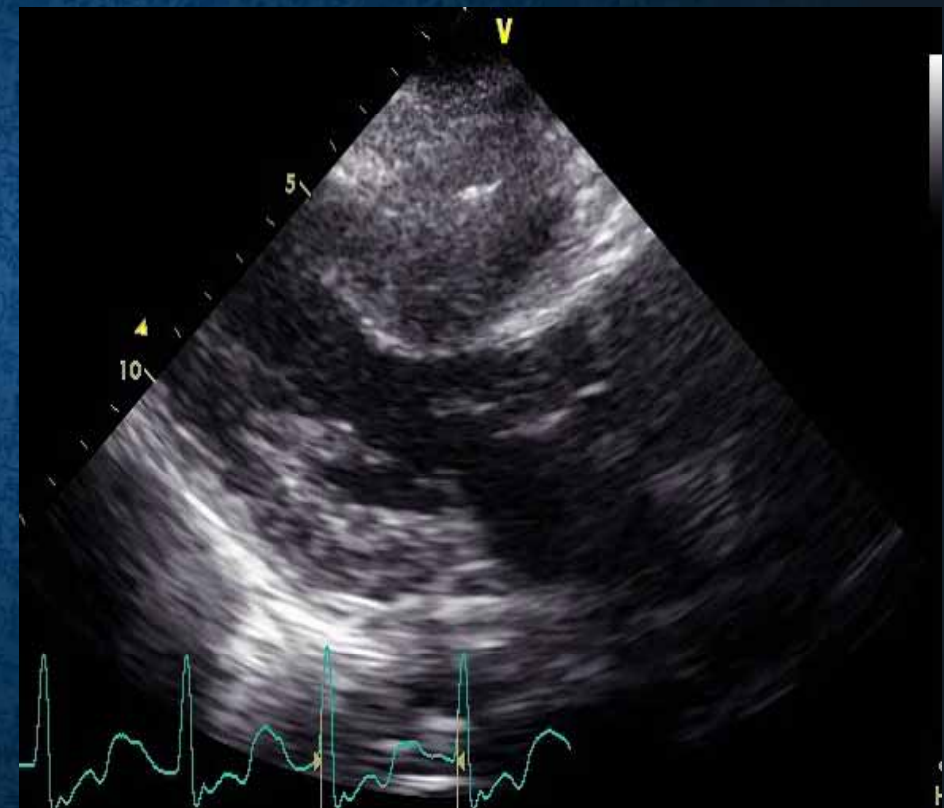
Our patient's TTE



TTE finding after stopping IABP, dopamine and increasing hydration (1)



Before

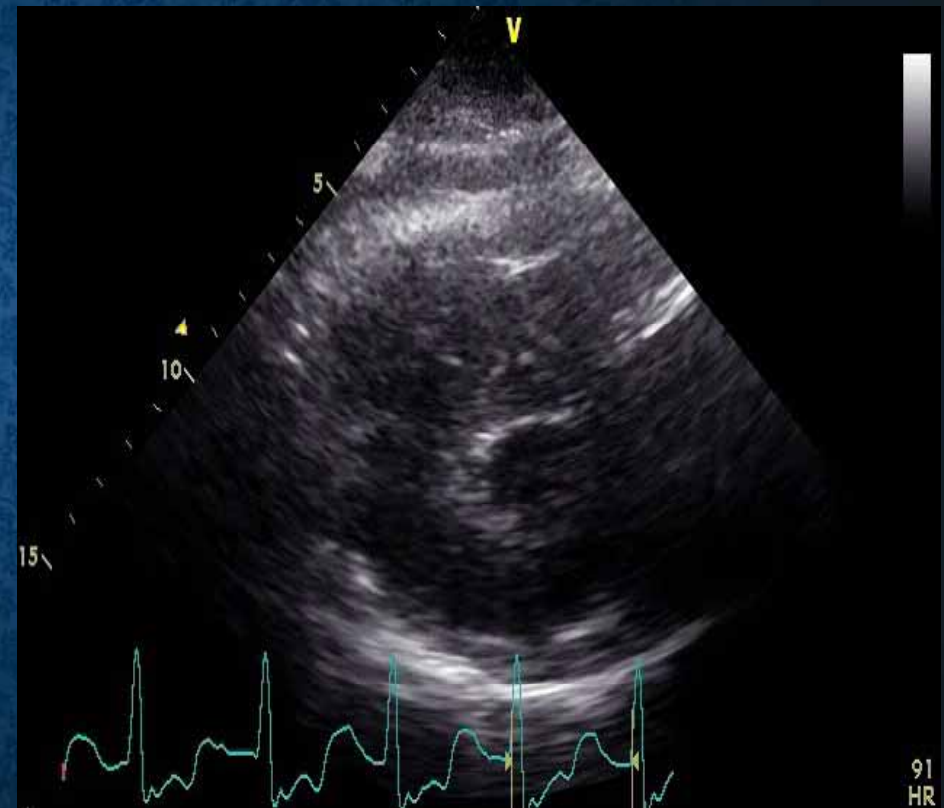


After

TTE finding after stopping IABP, dopamine and increasing hydration (2)



Before



After

The cause of cardiogenic shock:

maybe dynamic intraventricular

gradient (suicide LV)

Predictive parameter of DIG

- Small ventricular diameter
- **High transvalvular gradient**
- Good overall contractility
- **Discrete asymmetric hypertrophy**
- **Sigmoid shaped ventricular septum**
- **Tendency to small LVOT**