



# Case Report : Takotsubo Cardiomyopathy After Transcatheter Aortic Valve-in-Valve Replacement

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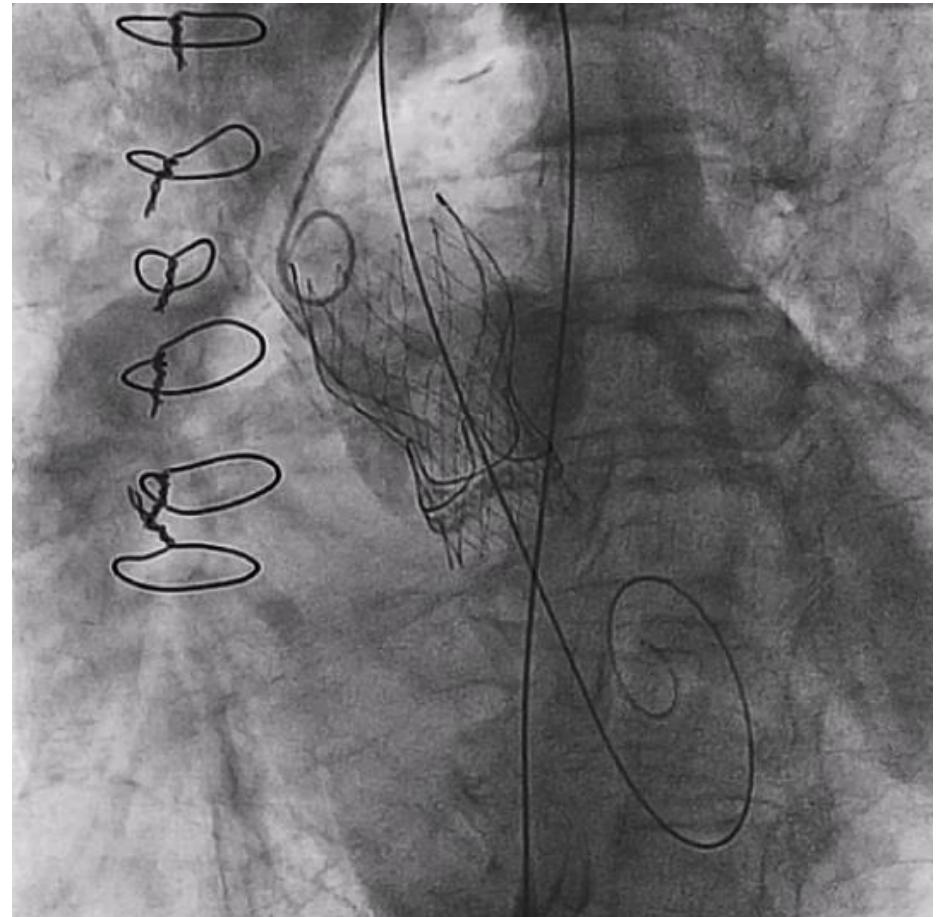
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# Case Presentation

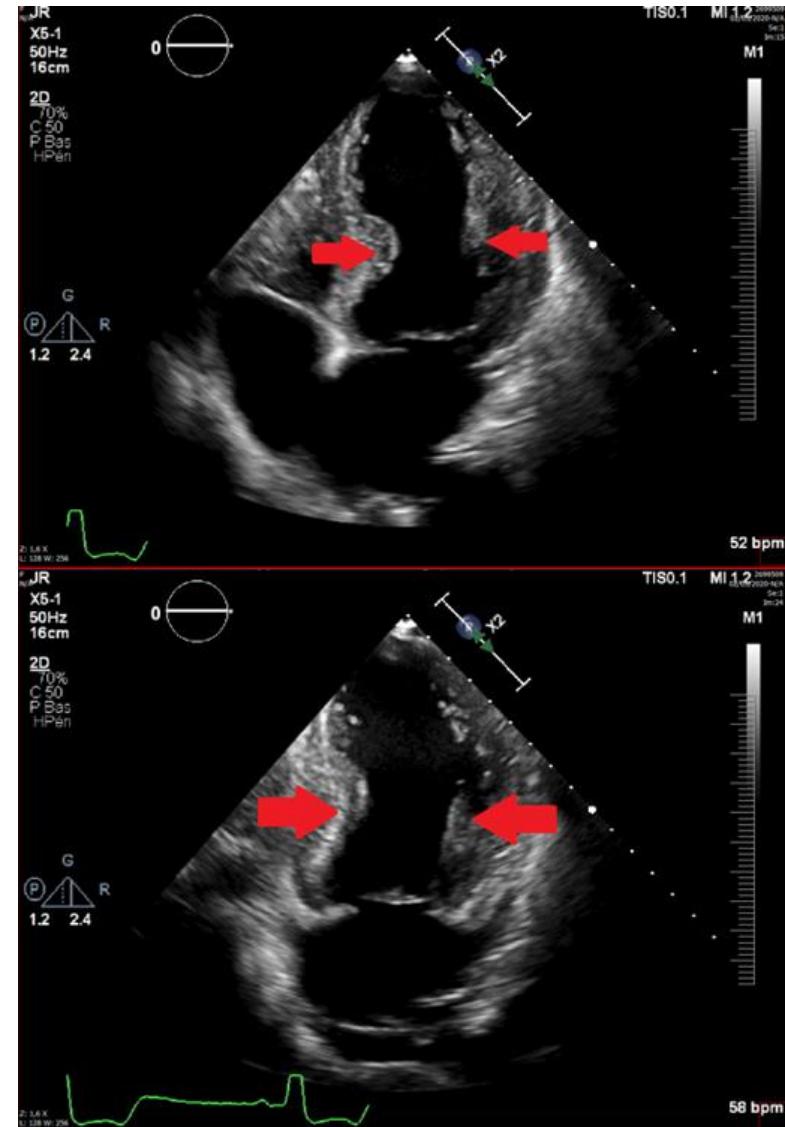
## History and Examination Findings

- 79 year-old woman with a dysfunctional aortic bioprosthetic valve : hospitalized for Valve-in-Valve Transcatheter Aortic Valve Replacement
- Normal preprocedural coronary angiogram
- Preprocedural TTE : Normal LVEF, severe intraprosthetic leak, LV dilation

- Implantation of a 23mm Evolut R valve (Medtronic, Minneapolis, Minnesota)
- Local anaesthesia, no fast ventricular pacing, patient asymptomatic and haemodynamically stable during procedure
- End-procedure angiogram : well-implanted valve, no leakage, no coronary obstruction (see opposite)
- End-procedure TTE : well-implanted valve, no pericardial effusion, no leakage

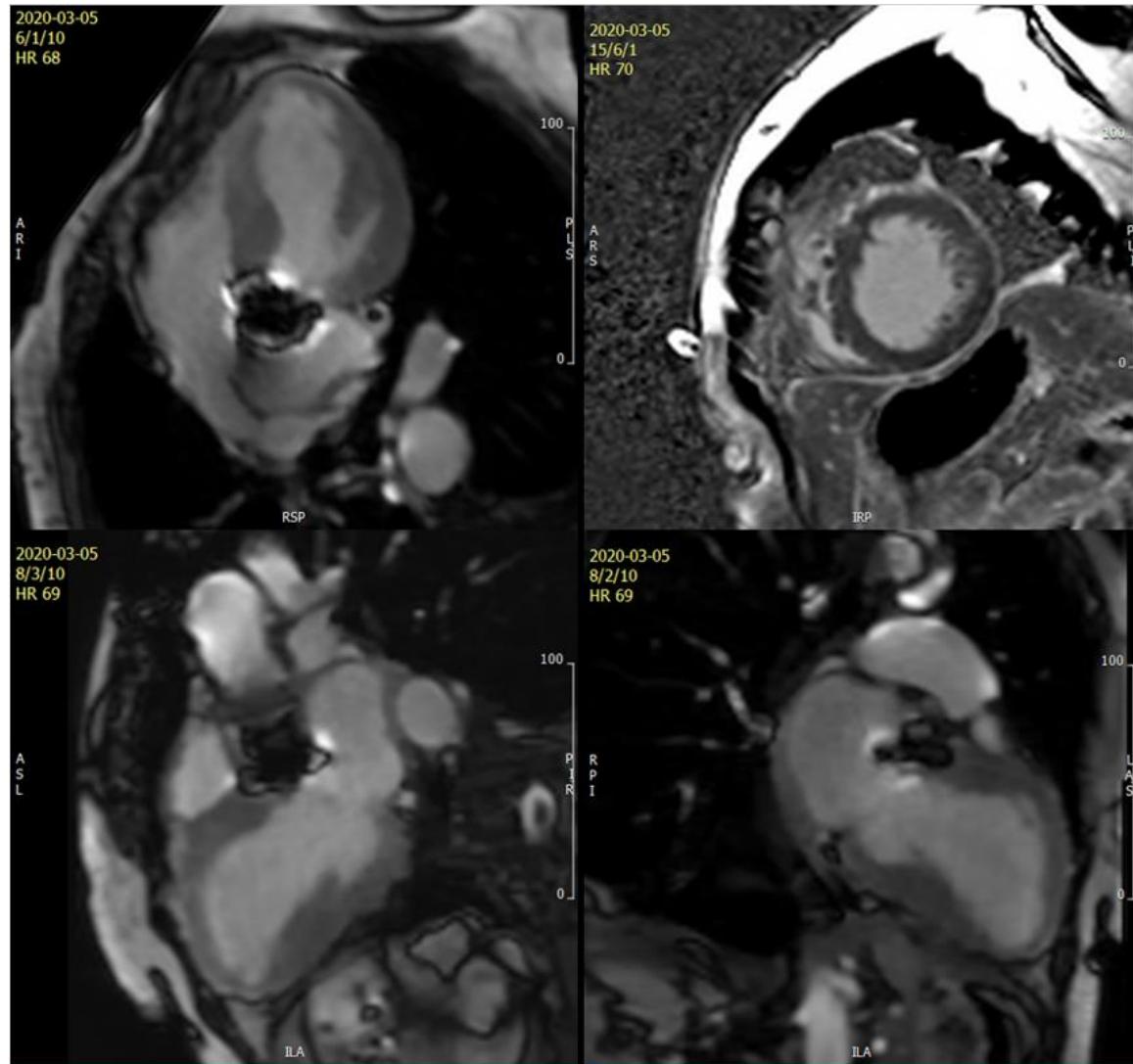


- Reevaluation TTE, 4 hours after TAVI : LVEF 40%, LV dilation, apical akinesia, compensatory hyperkinesia of all basal myocardial segments

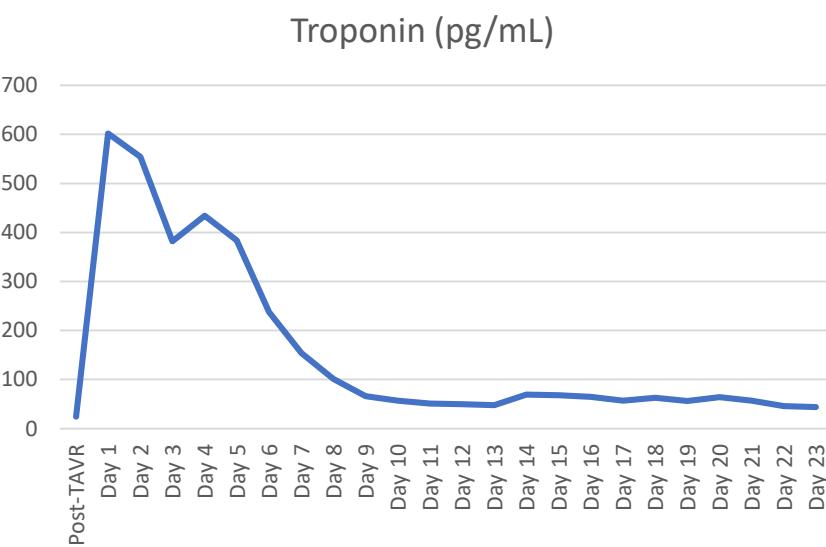


- Coronary CTA (day after TAVI) to rule-out asymptomatic coronary obstruction : no coronary lesion/obstruction
- Resting myocardial perfusion scintigraphy (6 days after TAVI) : myocardial necrosis, apical ballooning, hyperkinesia of basal myocardial segments, LVEF 30%

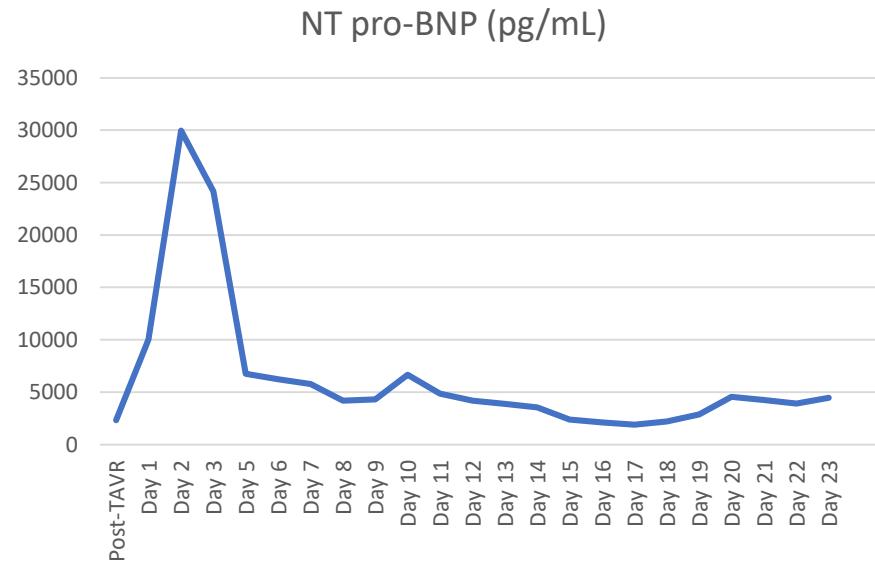
- Cardiac MRI (8 days after TAVI), to rule out myocardial necrosis and myocarditis : no fibrosis/necrosis, no myocarditis



- Peak HS Troponin 4 hours after procedure



- Peak NT pro-BNP 1 day after procedure



- No symptoms throughout whole hospital stay
- No ST-elevation on EKG, but de novo LBBB 6 days after TAVI
- Control TTE and Radionuclide Ventriculography (14 days after TAVI) : ad integrum LVEF recovery

- Diagnosis of Takotsubo was established on :
  - Transient LV wall motion anomalies
  - Transient Troponin elevation
  - Absence of coronary artery obstruction and absence of myocarditis
- No organic trigger to the cardiomyopathy found in this case :
  - No predilation nor fast ventricular pacing were performed
  - No inotropic/vasoactive drug was used
  - No balloon inflation was necessary to implant the Evolut R valve (autoexpandable device)
- Already a rare occurrence in TAVI, this case constitutes the first post-TAVI Takotsubo case in a valve-in-valve procedure

- Stress Cardiomyopathy can be linked to TAVR.
- Periprocedural myocardial infarction by coronary occlusion always has to be ruled out first.