





TAVR Nightmare Case Series

Unexpected Transcatheter Valve Frame Collapse – All Hands on Deck

Prof. Dr. Nicolas M. Van Mieghem Professor and Director of Interventional Cardiology Thoraxcentrum, Erasmus University Medical Center Rotterdam



Conflict of Interest

>Research Grant Support: Abbott, Boston Scientific, Edwards

Lifesciences, Medtronic, PulseCath, Daiichi Sankyo, Teleflex,

Siemens, Pie Medical

Consultancy: Abbott, Boston Scientific, Medtronic, PulseCath,

Daiichi Sankyo , Amgen, Teleflex, Abiomed, Pie Medical, Anteris,

JenaValve, Materialise

Erasmus MC

Work Up

<u>86-year-old male</u>

- **Progressive dyspnea (NYHA IV), angina (CCS 3) and syncope**
- Relevant Cardiac History: recent pacemaker for complete heart block
- Severe AS
- Coronary Angiogram: Right dominant system, non-obstructive CAD

- Hart Valve Team meeting:
 - o <u>STS-Prom</u> 8.16%
 - Very high operative risk ⇒ TAVI



Transthoracic Echocardiography





Erasmus MC

zalus

- **EF 55%.**
- V_{max} 5.44m/s
- MG 77mmHg, PG 119mmHg







- Agatston score = 6131HU
- Horizontal aorta

0

- Annulus area = 545mm³
 - Membranous septum length = 3.6mm





TAVI Procedure – ACURATE Neo2 Large







TAVI Procedure – ACURATE Neo2 Large









TAVI Procedure – ACURATE Neo2 Large



Erasmus MC Cafung







Post Procedure









What had happened?



Marker goes up, but should have gone down



- The positioning marker follows the catheter directional movement upon deployment – forward push would drive the marker into the LV.
- Here, the marker lifts to the ascending aorta (suggesting repositioning or pulling maneuver to prevent further diving).
- > The capsule remains in contact with the frame.
- The physical gap between the marker and the inflow of the valve = safety check (- not present here; forward push would be required now to create this physical gap)











> Solution = to pull on the wire & push the delivery catheter forward to create the gap



Takeaways

 \geq



Case presentation prepared with Drs S Verhemel, MD

@drnvanmieghem

To bail out = rewire & balloon & revalve

