A Complex Case of Post-TAVR Paravalvular Leak Closure

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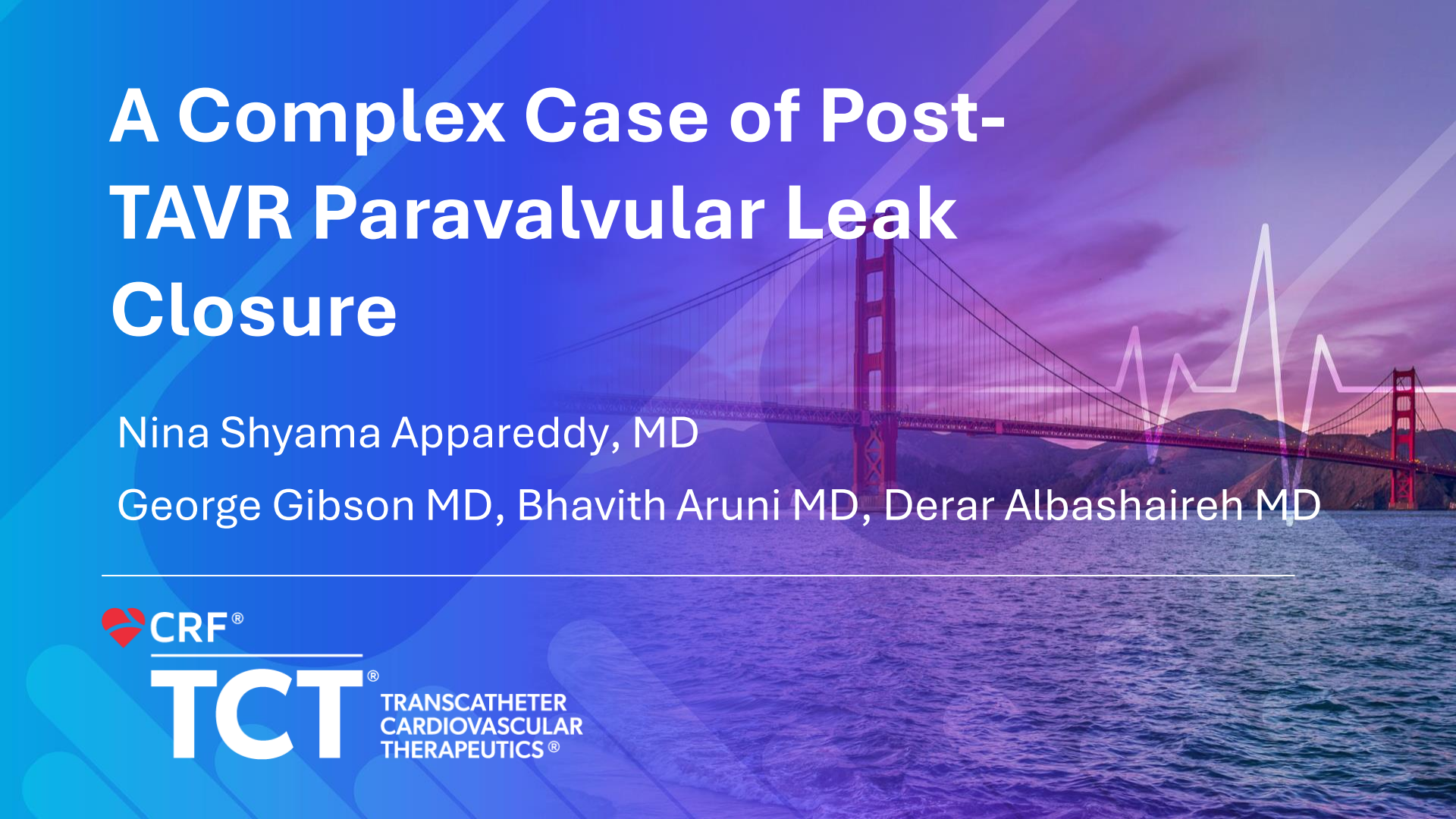

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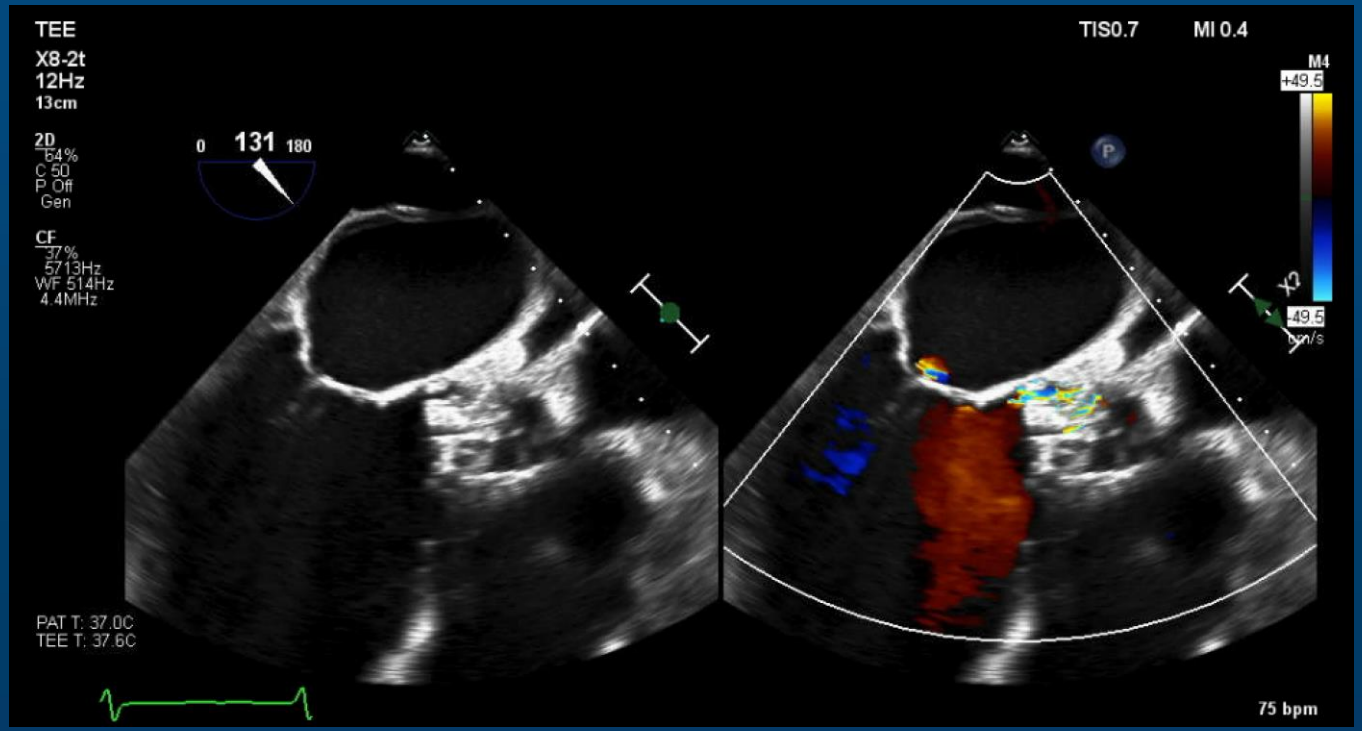
Disclosure of Relevant Financial Relationships

I, Nina Shyama Appareddy, DO NOT have any financial relationships to disclose.

History

- 68-year-old male with bicuspid aortic valve, severe aortic stenosis, and biventricular failure underwent TAVR with a 29mm SAPIEN Ultra
- Complicated by peri-procedural pericardial effusion
- Mild paravalvular leak at the conclusion of the procedure
- Presented 6 months later with dyspnea on exertion
- Severe paravalvular leak (PVL) on TTE

Transesophageal Echocardiography

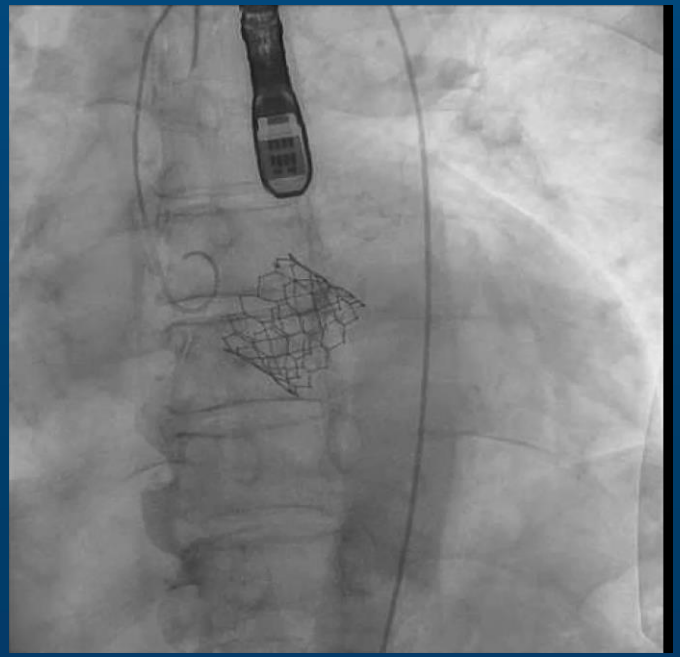


Severe PVL adjacent to the left coronary cusp between the 12 to 2 o'clock position

Crossing the Defect

- Initial attempts: AL1 and AL2 catheters + straight wire
- Success: EBU 4.0 + angled Glidewire
- *Key problem*: Unable to exchange for stiff wires (Amplatzer, Safari)
  - delivery catheters (multipurpose, shuttle sheath) could not cross defect
- Rubicon advanced over Glidewire, enabling exchange for Storq wire
- Rubicon exchanged for multipurpose with Rubicon telescoped through the guide
- Rubicon removed
- 6 x 4 mm Amplatzer Duct Occluder II (ADO II) deployed

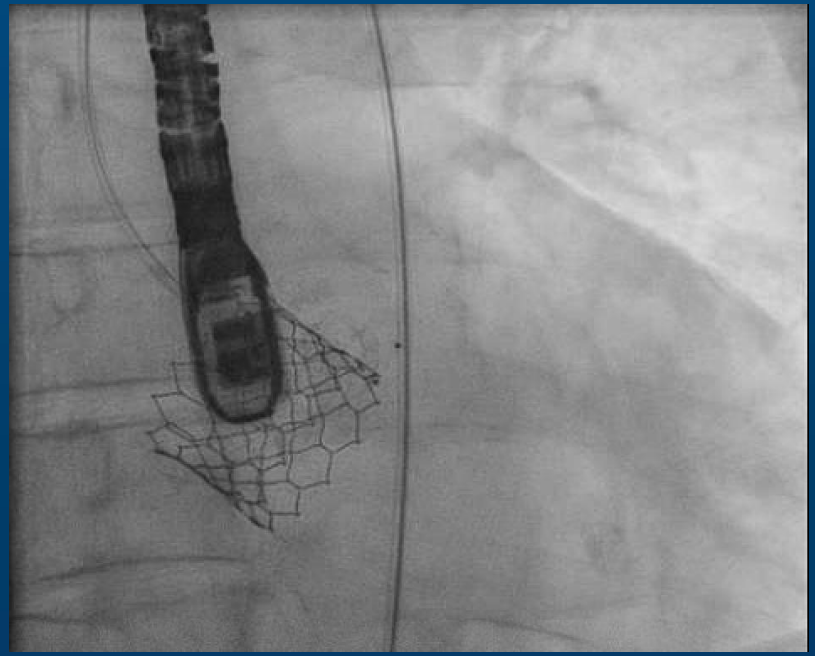
Second ADO II



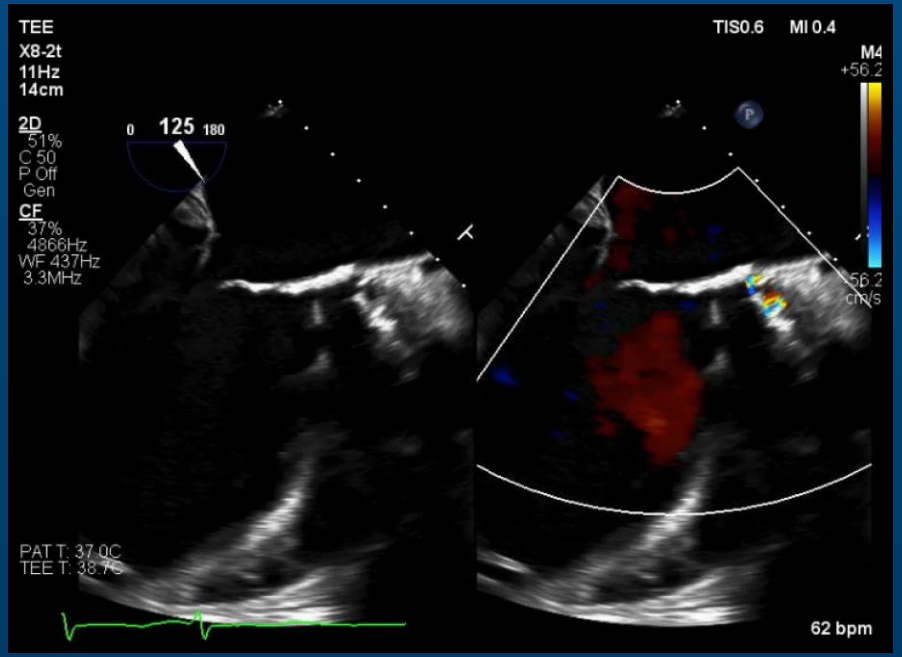
- Ascending aortography and TEE demonstrated residual leak

Second ADO II

- Defect was recrossed using same approach
- A second 6 x 4 mm ADO II was deployed



Final Result



Reduction of PVL from severe to mild

Summary

- PVL multifactorial
  - Bicuspid
  - Pericardial effusion
  - Biventricular failure
- *Challenges*:
  - Leak location (proximity to coronary ostia)
  - Narrow, tortuous, angulated channel
- Strategic wiring and catheter manipulation to cross