

Combining Resection and Respect Technique To Manage the Tall Posterior Leaflet in Robotic Mitral Valve Repair

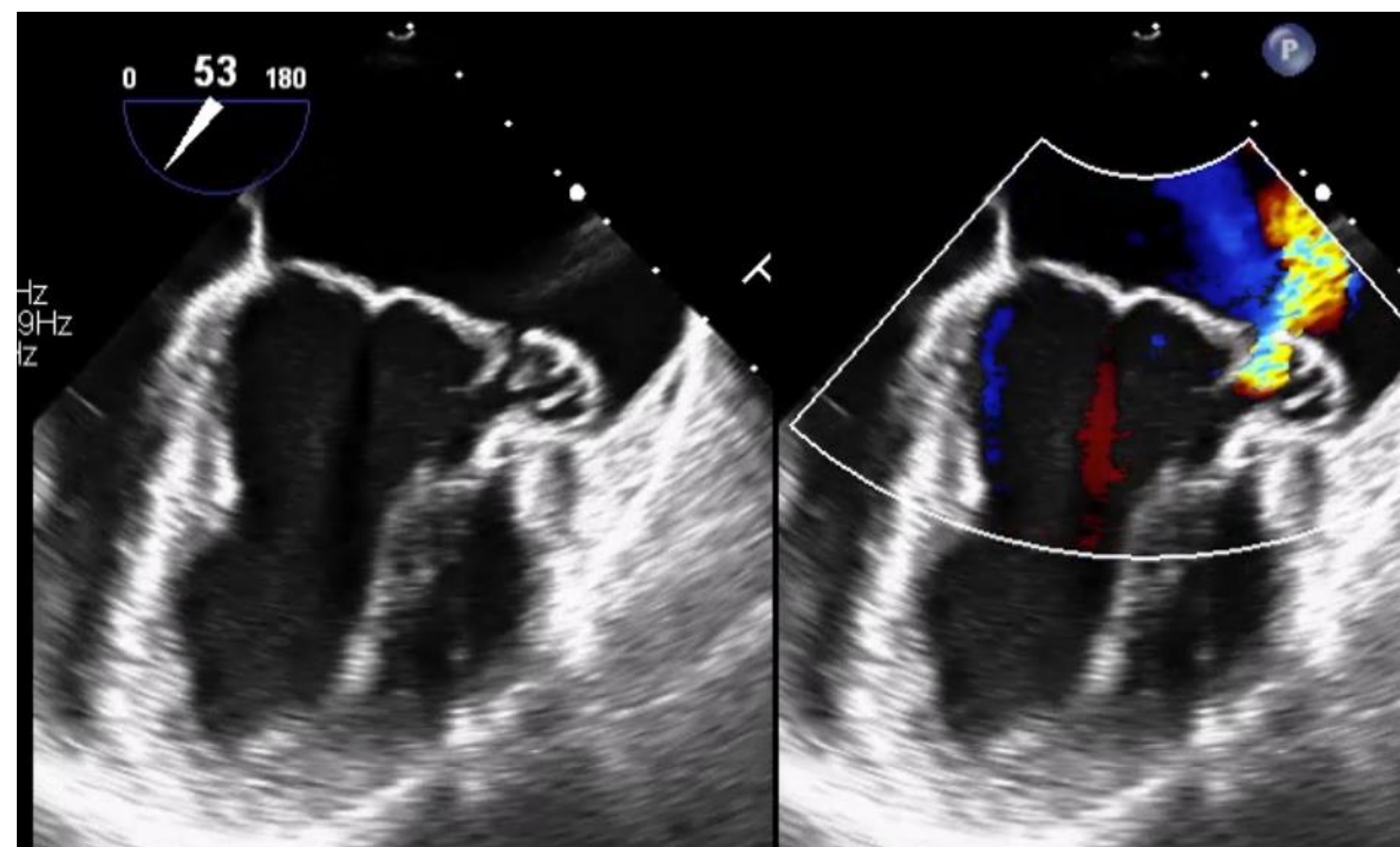
Yuki Nakamura, Tarek Malas, Per Wierup, Lars Svensson, Marc Gillinov
Department of Thoracic & Cardiovascular Surgery, Cleveland Clinic

Objective

- ✓ Systolic anterior motion (SAM) is a major concern after mitral valve (MV) repair for degenerative mitral valve regurgitation (dMR) especially with tall posterior leaflet.
- ✓ We present a simple and reproducible MV repair technique that combines resection and respect (Neochoords) to prevent post-repair SAM.

Case Presentation

- ✓ 60-year-old woman with asymptomatic degenerative MR
- ✓ PMH: 1st degree AV block
- ✓ TEE: moderate MR, P2 prolapse, a cleft between P1 and P2, and anatomical features associated with an increased risk of SAM.

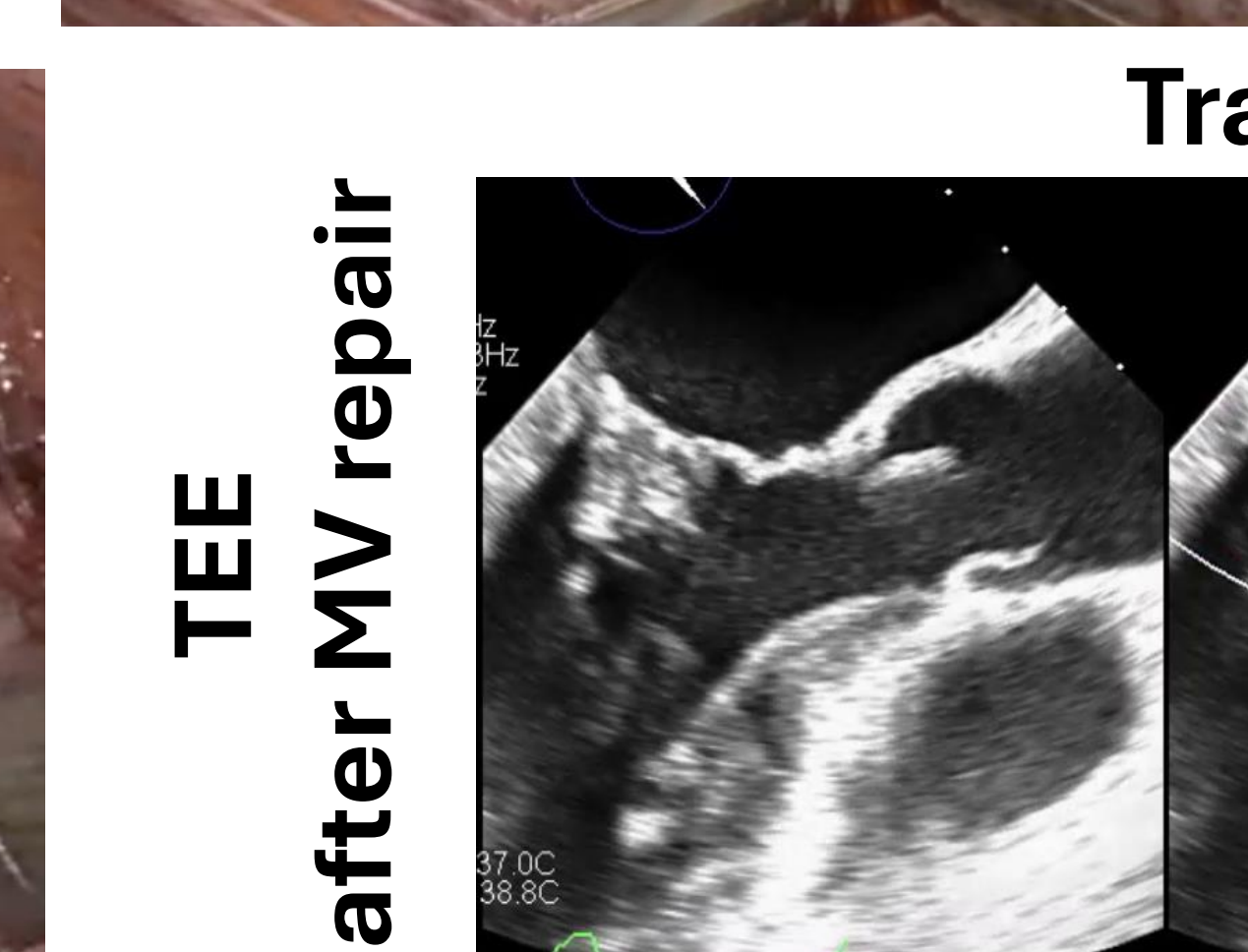
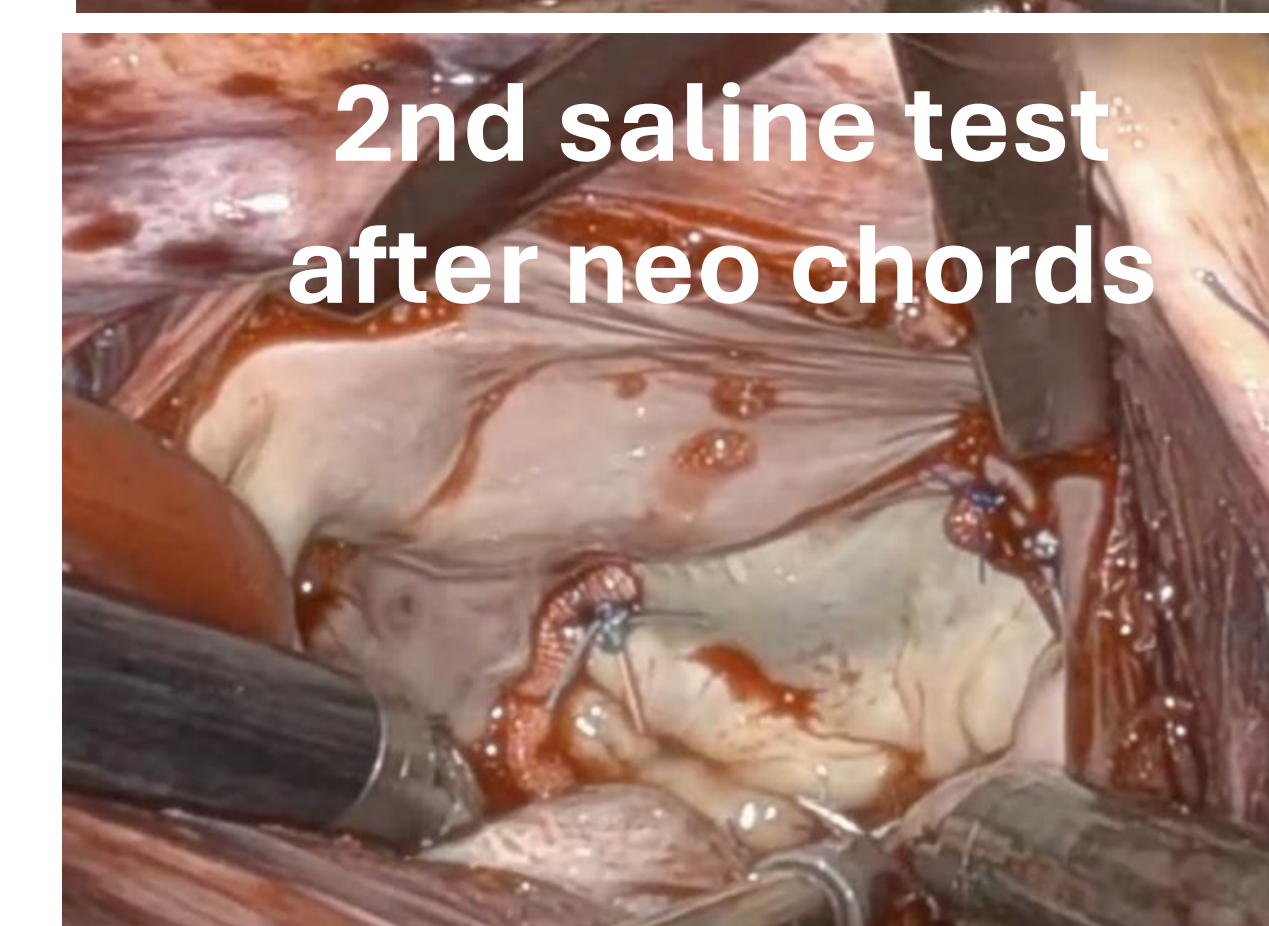
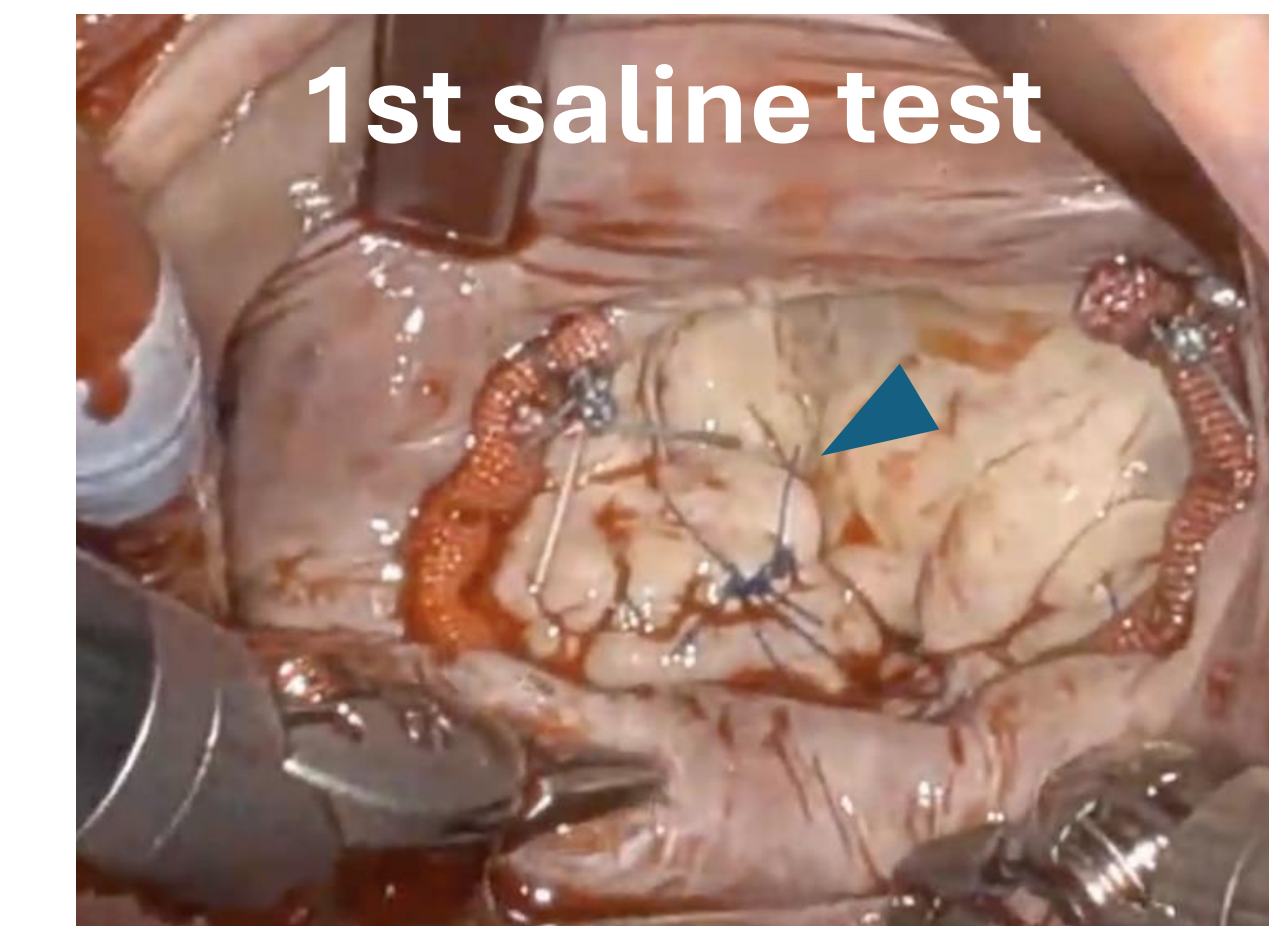
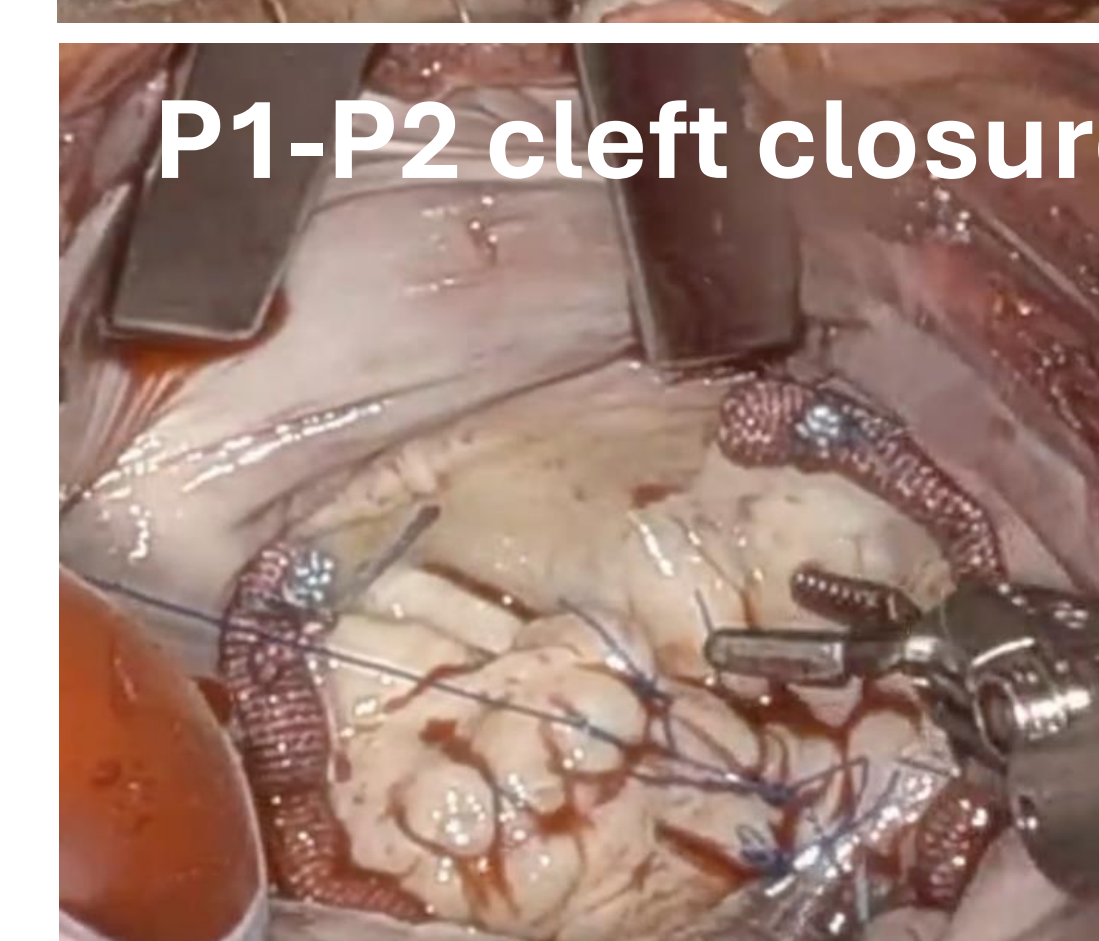
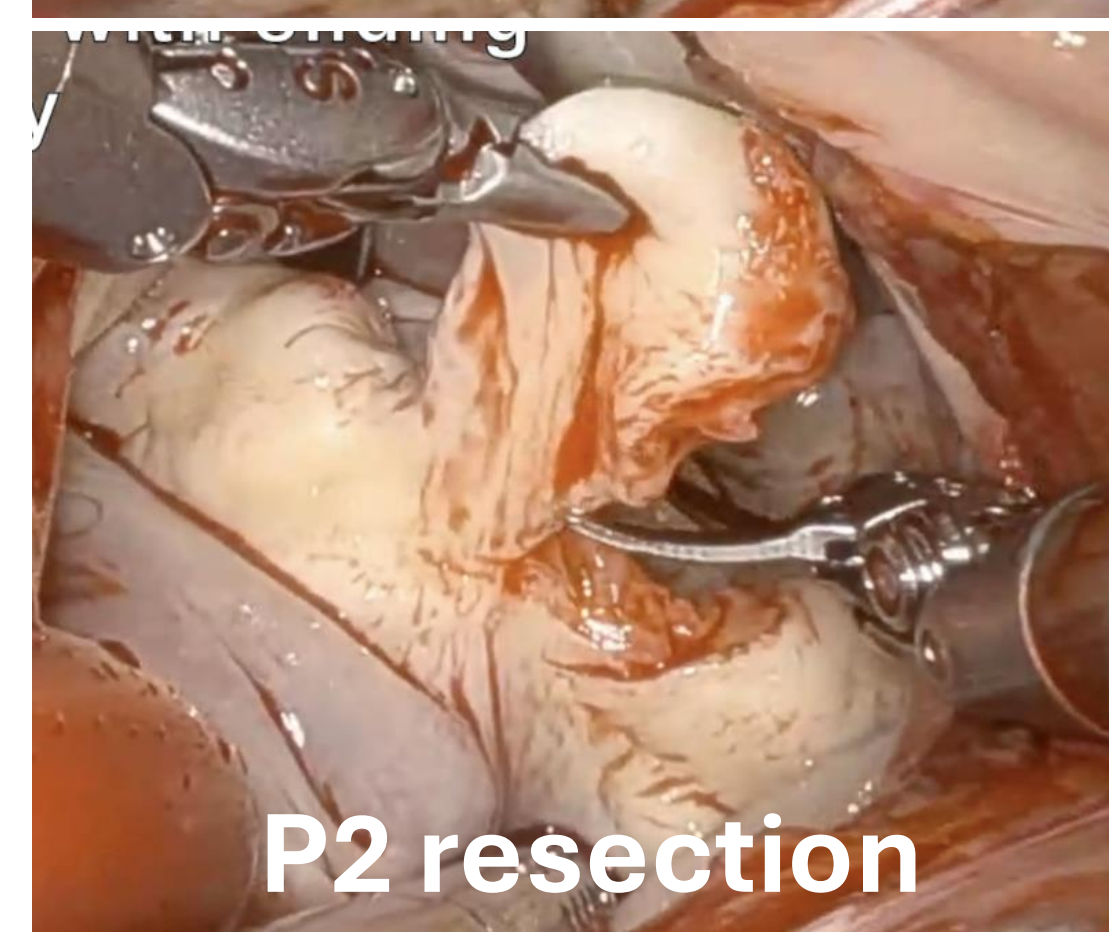
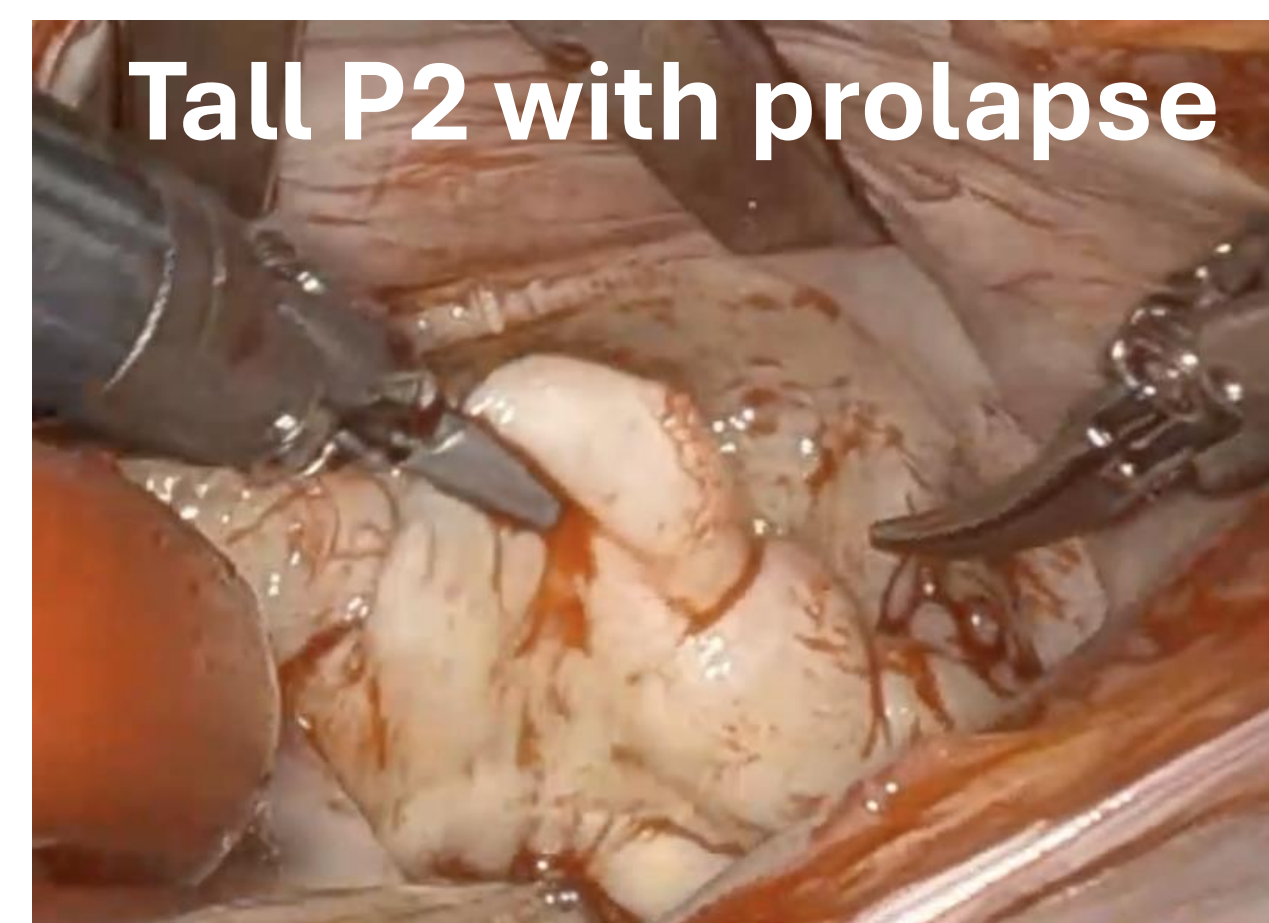


Discussion

- ✓ Left ventricular modification was reported as a safe and effective technique to prevent postoperative SAM in robotic MV repair for the patient with increased SAM risk. Loulmet DF, et al. Ann Thorac Surg. 2025
- ✓ A technically simple strategy was taken in robotic MV repair for anatomically complex dMR, which may be an avenue to increase MV repair rates in robotic approach. Suri RM, et al. Circulation. 2015
Rowe G, Gill G, et al. J Thorac Cardiovasc Surg. 2024

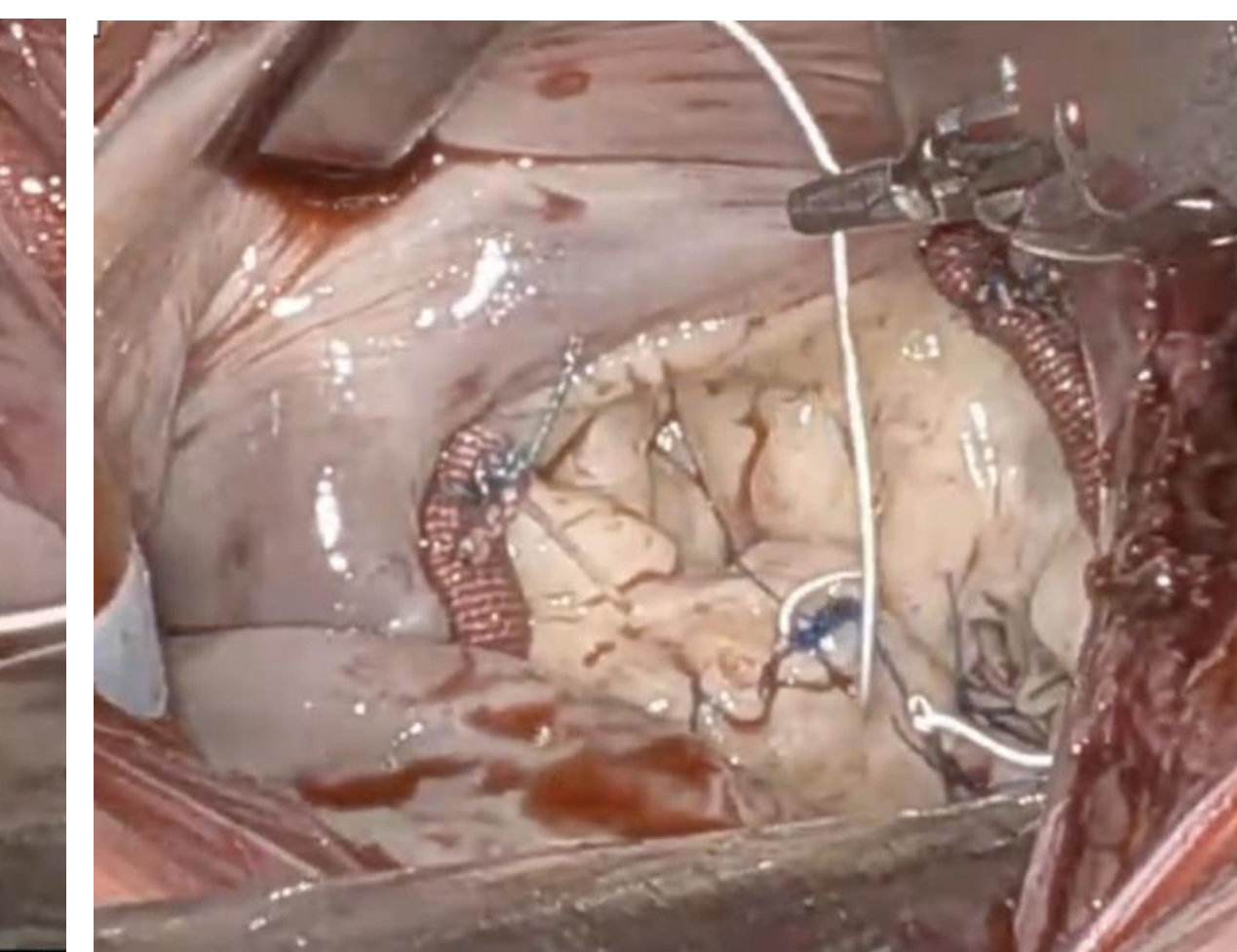
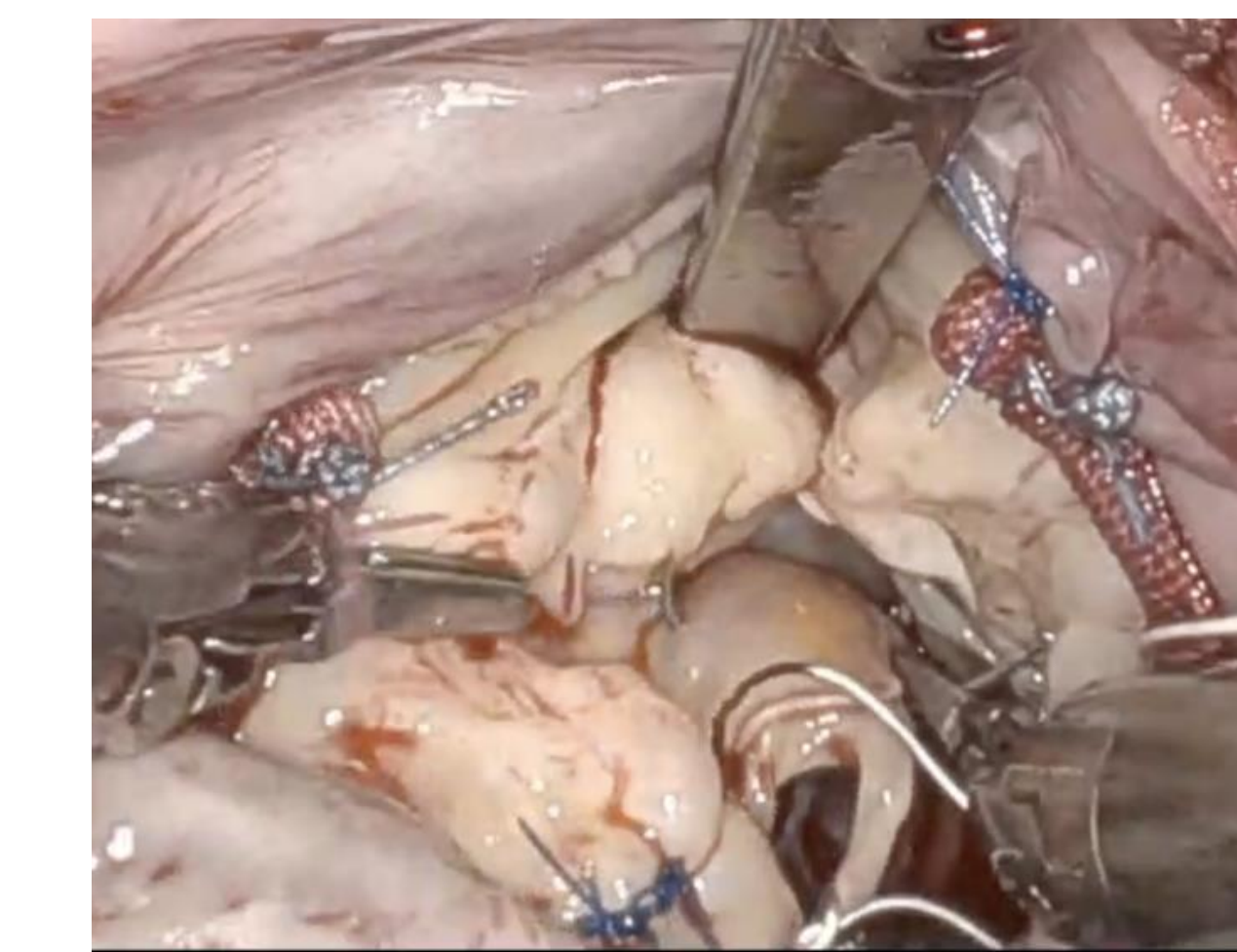
Procedures

- ✓ Procedures: Robotic MV repair (P2 resection with sliding valvuloplasty, Neochoord to P1, P1-P2 cleft closure, ring annuloplasty with 35 mm Duran band)



- ✓ No significant leakage on 1st saline test
- ✓ P1 remained taller than repaired P2 and native P3

Neo chord was added on P1

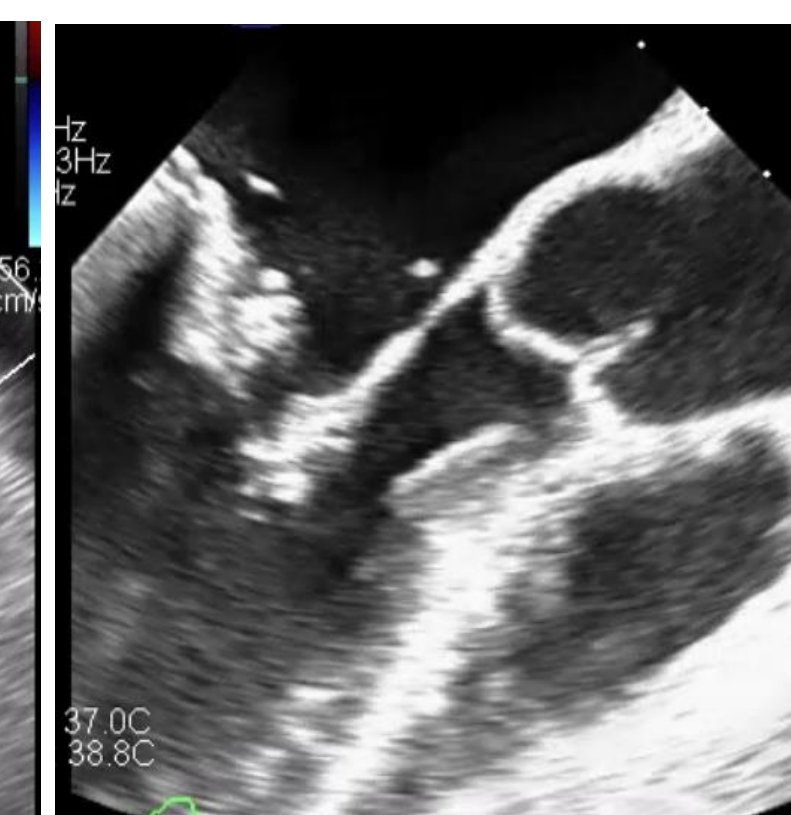
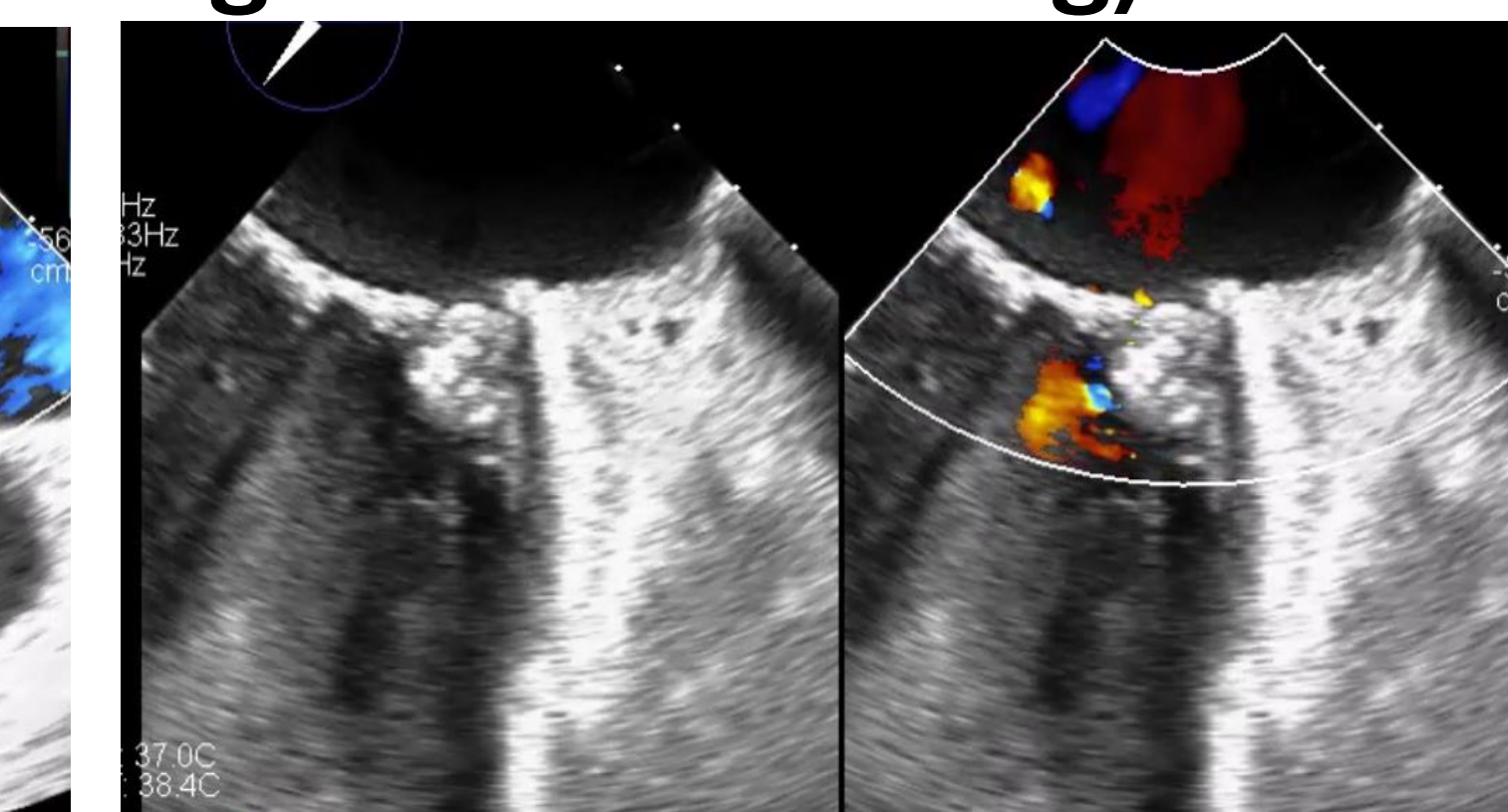
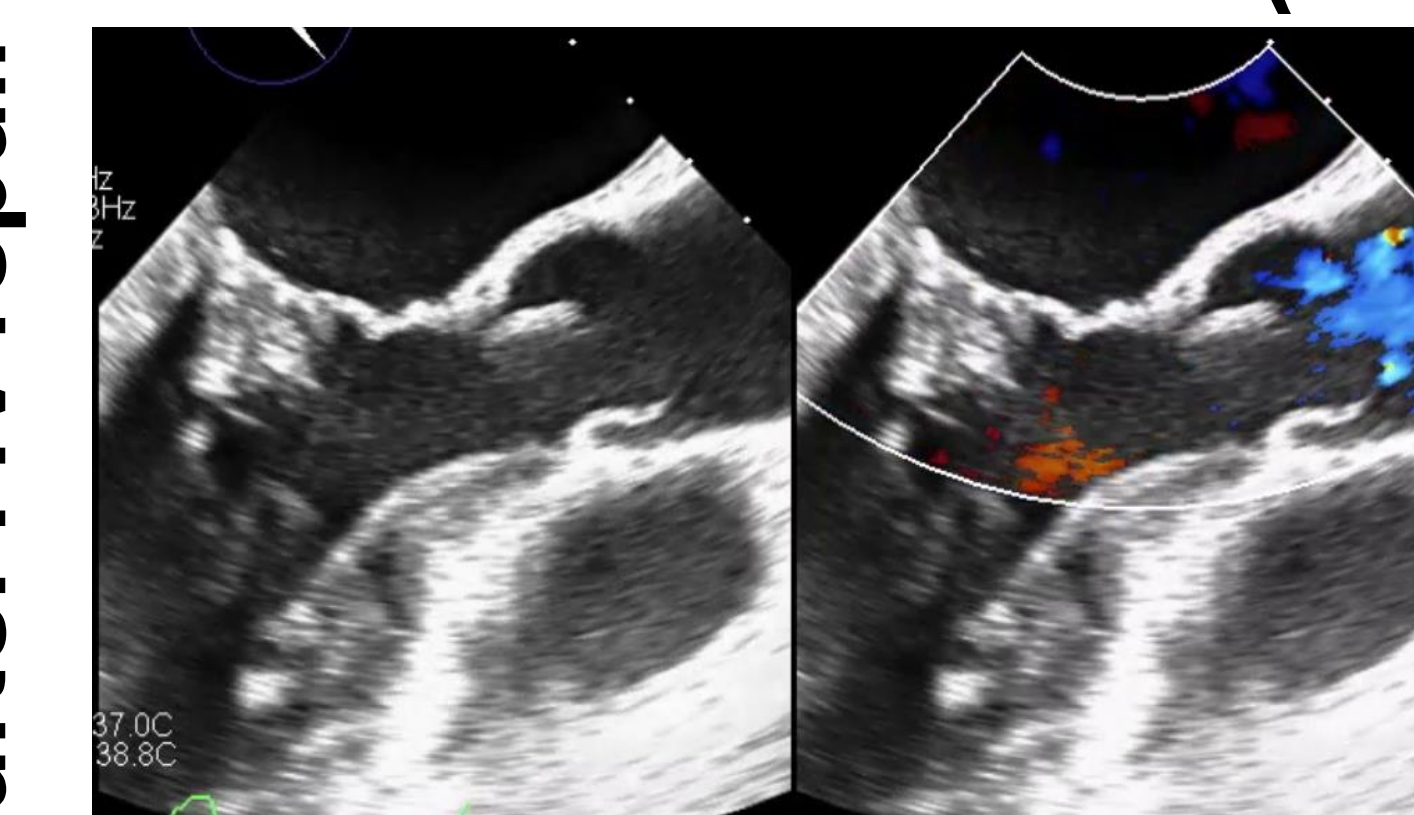


Stitch to pupillary muscle

No post-repair SAM

Trace MR (mean gradient 2 mmHg)

TEE after MV repair



Conclusion

- ✓ Robotic MV repair using a combined resect and respect technique with targeted neo chordae implantation is a simple and reproducible strategy to prevent postoperative SAM in dMR with a tall posterior leaflet.
- ✓ This combined strategy based on fundamental MV repair techniques may broaden the applicability of robotic MV repair in patients with increased risk of postoperative SAM.