



Transcatheter Mitral Valve in Valve (MViV) Surgery

A Novel Consideration for Patients at Prohibitive Surgical Risk



"Mona" Xiaomeng Deng, BS; Neal Shah, MD; Marcella A. Press, MD, PhD.

Backgrounds

- As patients age and mitral bioprostheses degenerate, redo surgery is the gold standard treatment for severely symptomatic patients. For patients not suitable for surgery, mitral ViV can be a therapeutic option.

Case Description

- An 80-year-old female with prior CABG and surgical mitral valve replacement presented with progressive heart failure. Despite adequate diuresis, her symptoms persisted. Echocardiogram revealed a severely stenotic bioprosthetic mitral valve. Her surgical risk was deemed high given redo sternotomy, advanced age, and severe comorbidities.

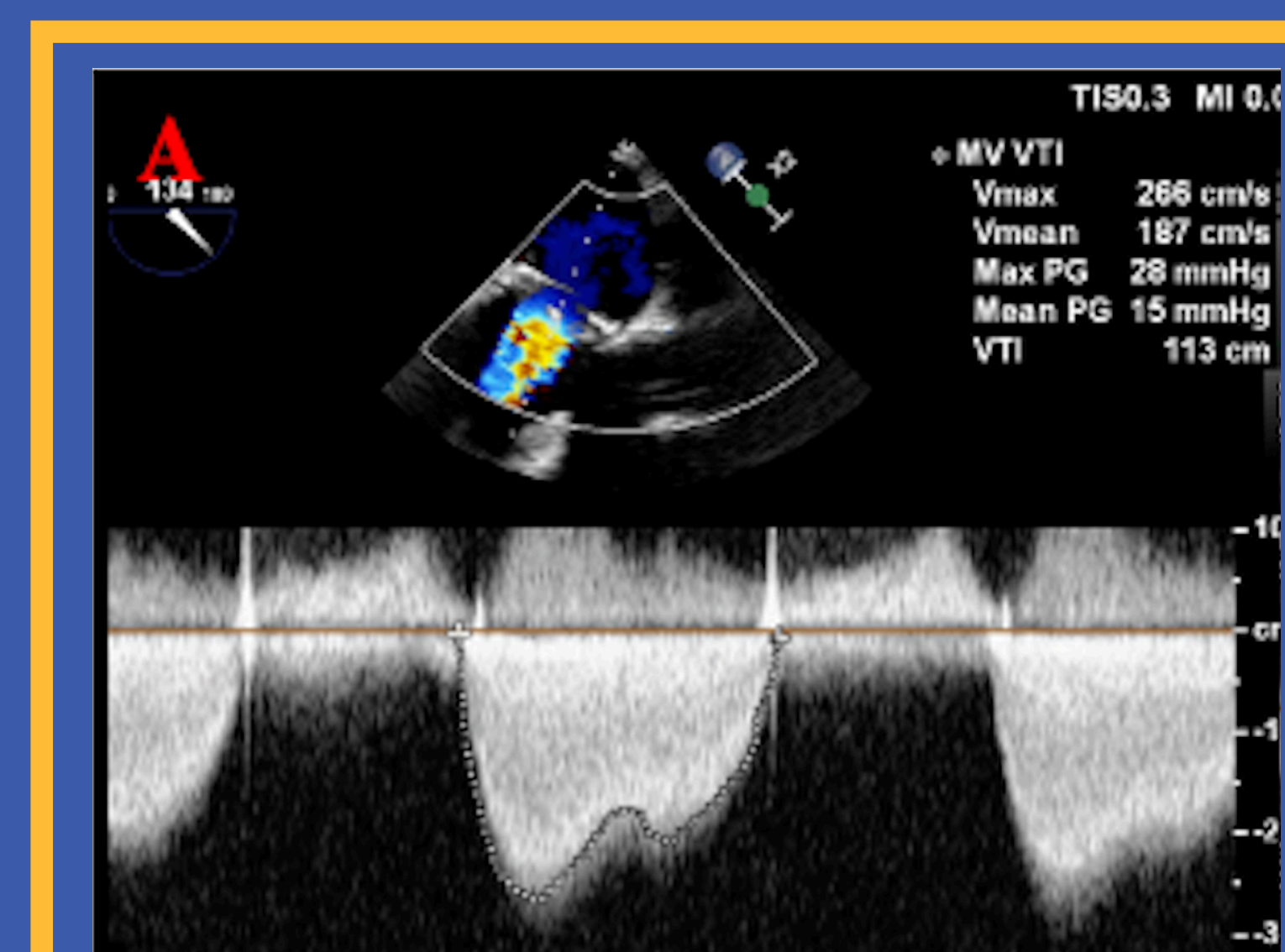
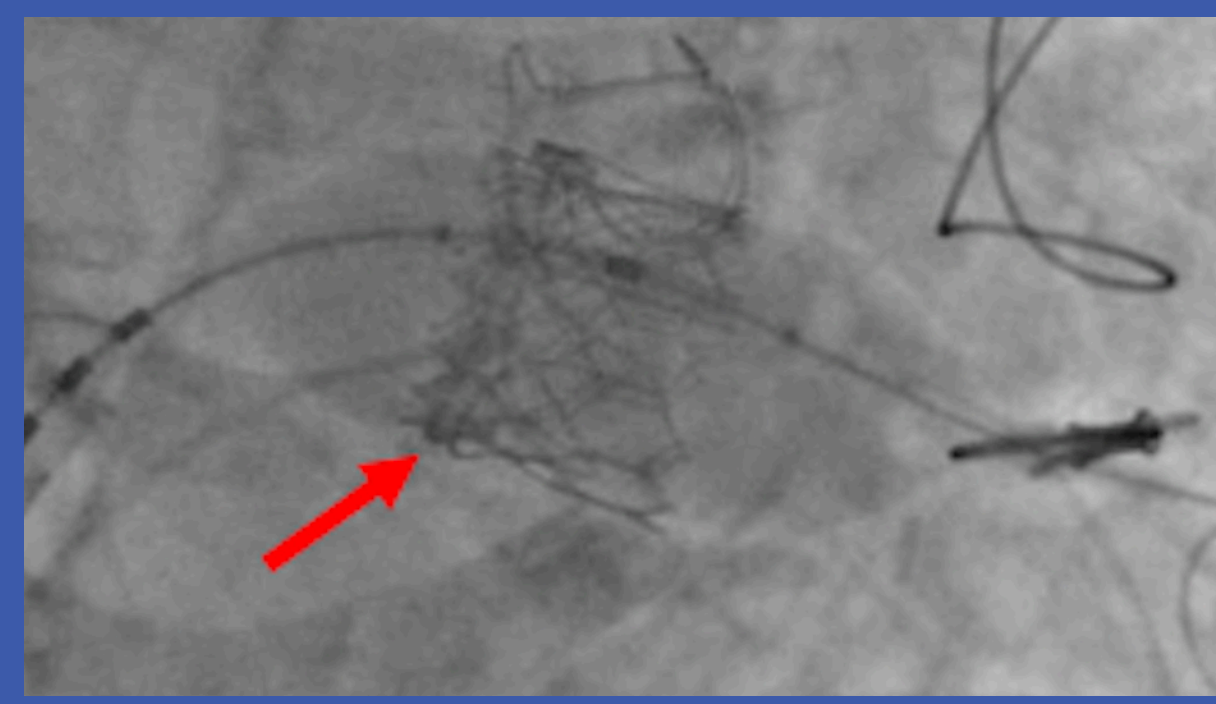
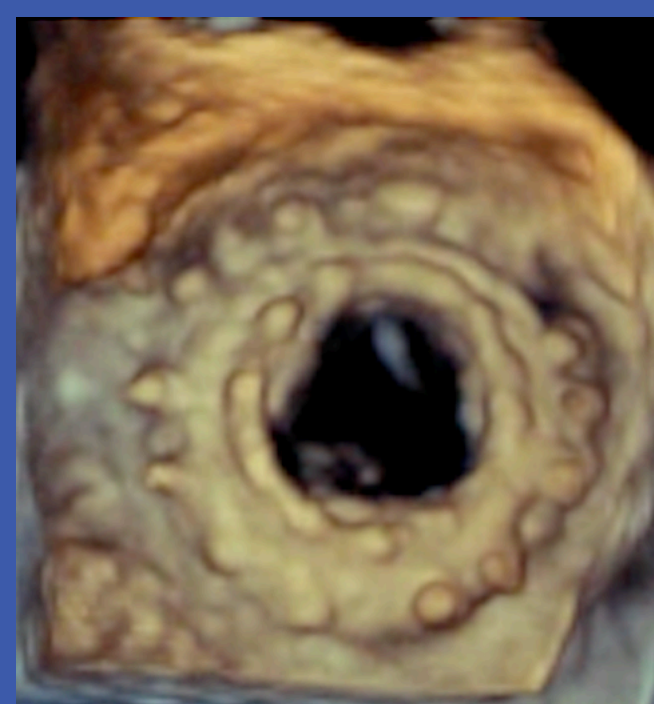


Figure A. Echo pre

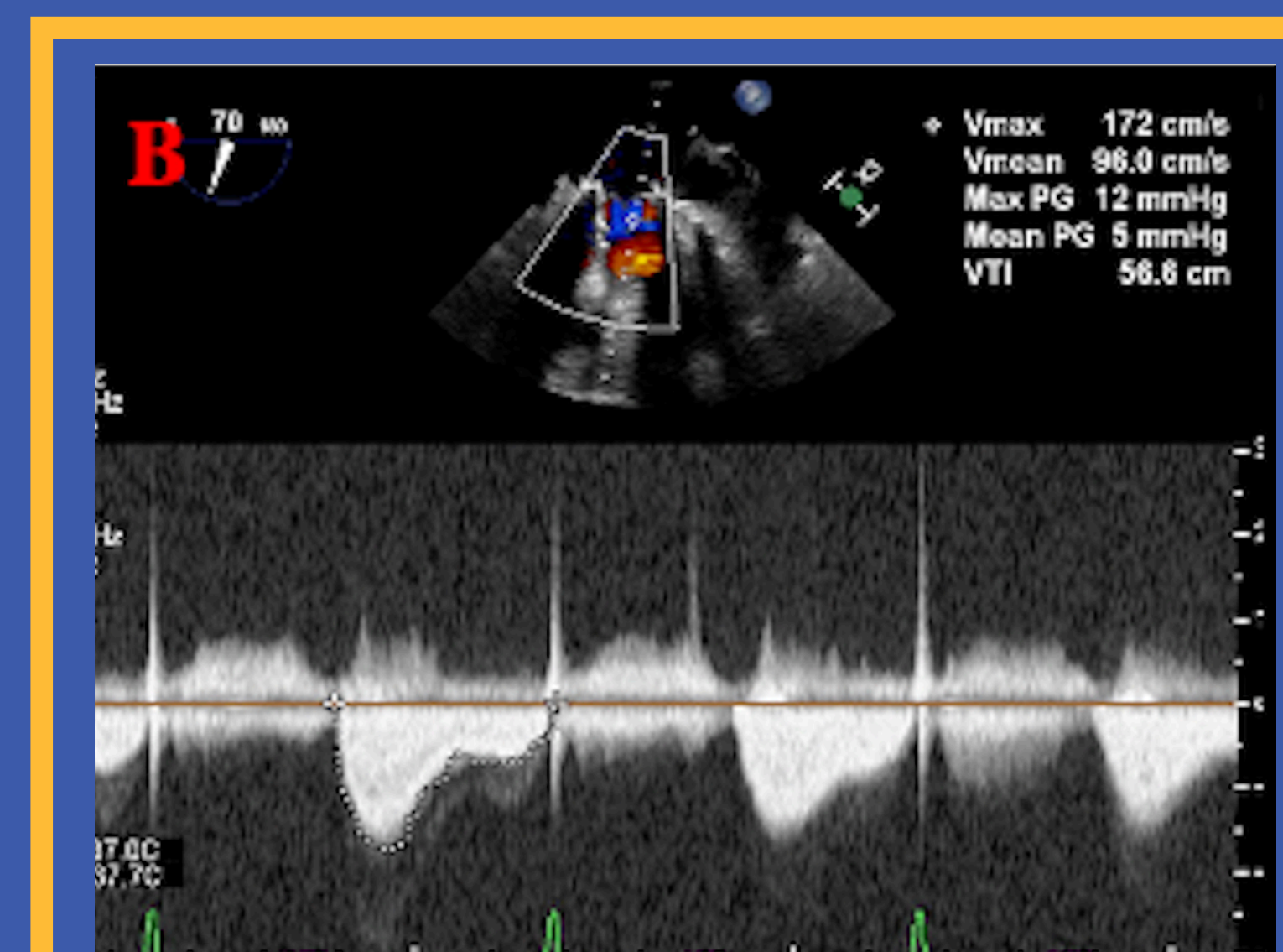


Figure B. Echo post

Decision-making

- ViV is commonly performed in the aortic position, and favorable clinical outcomes build for compassionate use in the mitral position.
- Preoperative imaging was utilized to predict the risk of LVOT obstruction for procedure. After a multidisciplinary heart team approach, the patient underwent mitral ViV surgery with successful implantation of a SAPIEN 3 valve (Figure C-E).
- Post-procedure, her mitral valvular function improved, and she experienced a dramatic symptom reduction (Figure B).

Conclusion

- This case demonstrates that for patients who are severely symptomatic from degenerative mitral bioprostheses and unable to undergo surgery, mitral ViV surgery can provide meaningful relief of symptoms and therefore is an appropriate therapeutic procedure to consider.