



Transaxillary Mitral Valve Repair in an Infant

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Background

This case demonstrates a minimally invasive transaxillary approach for mitral valve repair in a highly symptomatic 1-year-old infant. The patient presented with severe mitral insufficiency due to hammock-like papillary muscles and chordal abnormalities. Traditional sternotomy was avoided in favor of a less invasive strategy.

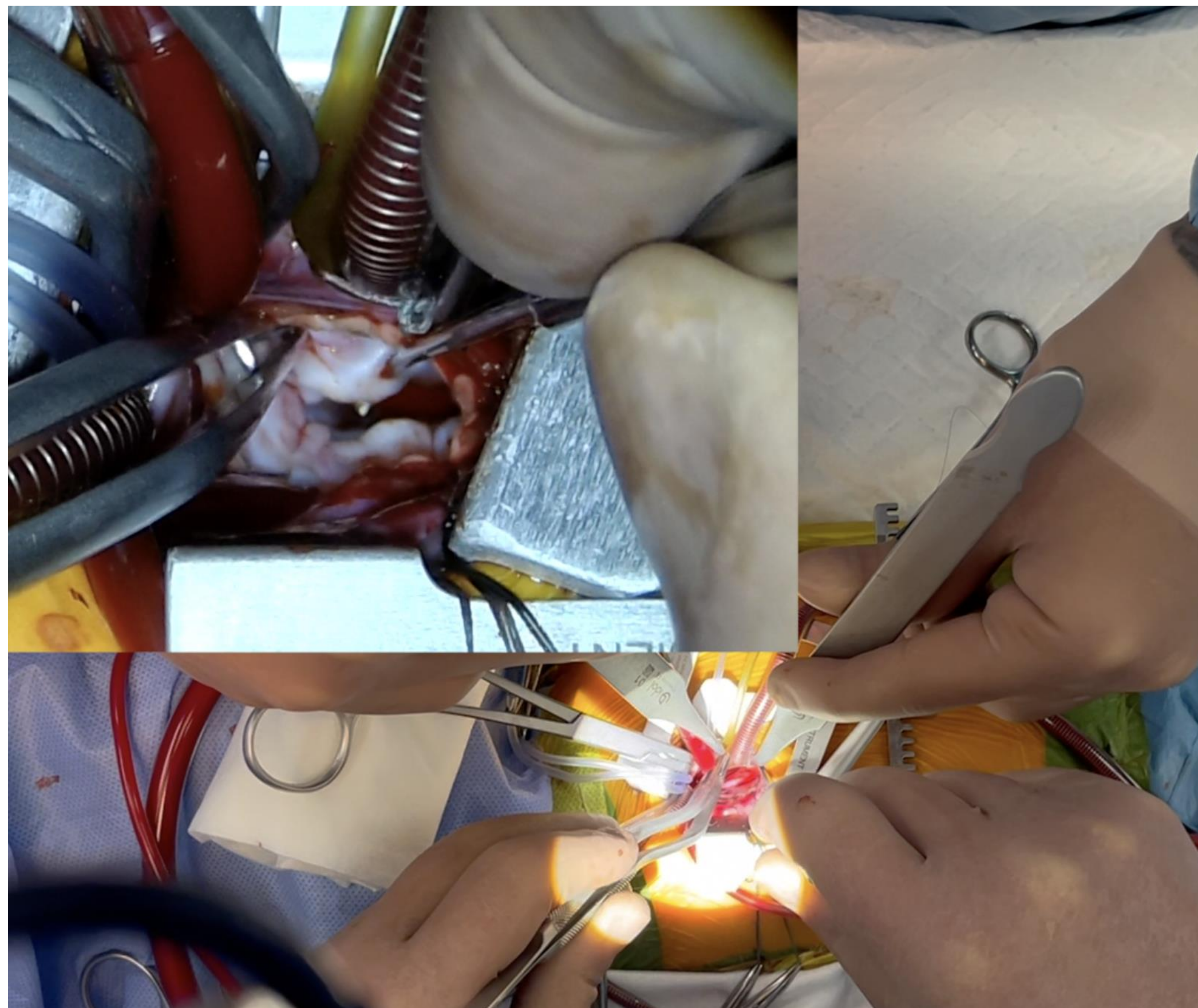
Case presentation

The patient had a body weight of 8 kg and a BSA of 0.4 m².

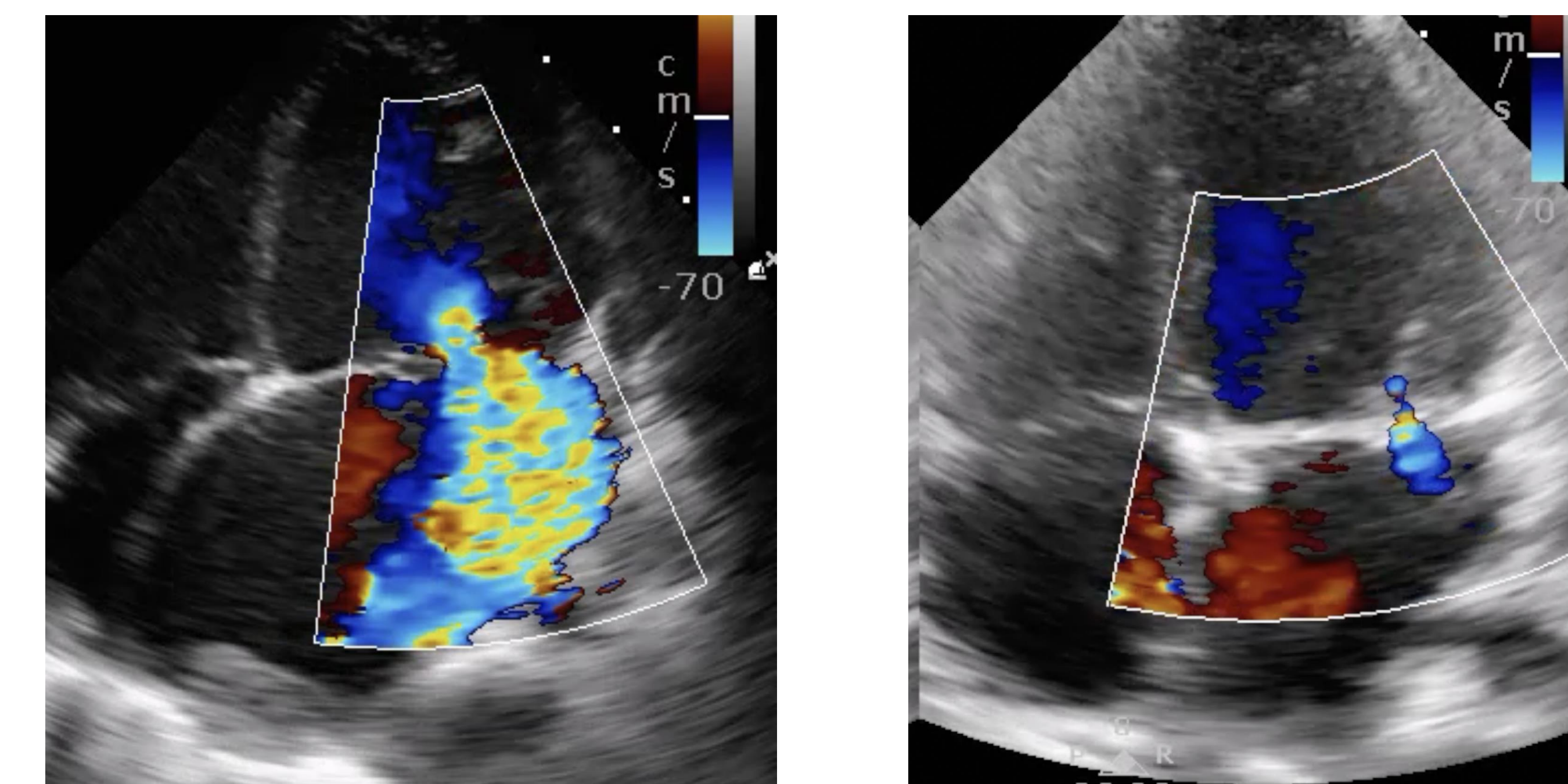
Surgical access was achieved through a 3 cm right axillary thoracotomy in the 4th intercostal space. Central cannulation for cardiopulmonary bypass was performed.

The mitral valve was approached via the left atrium and repaired using:

- Multiple interrupted annuloplasty sutures
 - Two artificial chordae to the A2 segment
- Wire-reinforced malleable venous cannulas and bayonet-type or angled instruments were used to enhance the working space within the limited access.



Pre- and postoperative echocardiography



Results

The infant tolerated the procedure well. Postoperative recovery was uneventful:

- 1 night in the intensive care unit
 - Discharge on the 5th postoperative day
- At 3-month follow-up:
- Physical tolerance improved markedly
 - Weight increased by 2 kg
 - Residual mitral insufficiency was mild to moderate

Conclusions

The transaxillary minithoracotomy offers adequate exposure for complex mitral valve repair, even in small pediatric patients. Standard repair techniques can be applied without the need for sternotomy, resulting in excellent recovery, cosmetic outcomes, and surgical effectiveness.