



Aortic Valve Replacement Via Right Anterior Minithoracotomy After Minimally Invasive Coronary Artery Bypass Grafting Via Left Anterior Thoracotomy

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Background

This case demonstrates minimally invasive aortic valve replacement via right mini-thoracotomy in a patient with prior coronary artery bypass grafting performed through a left anterior mini-thoracotomy approach.

Case presentation

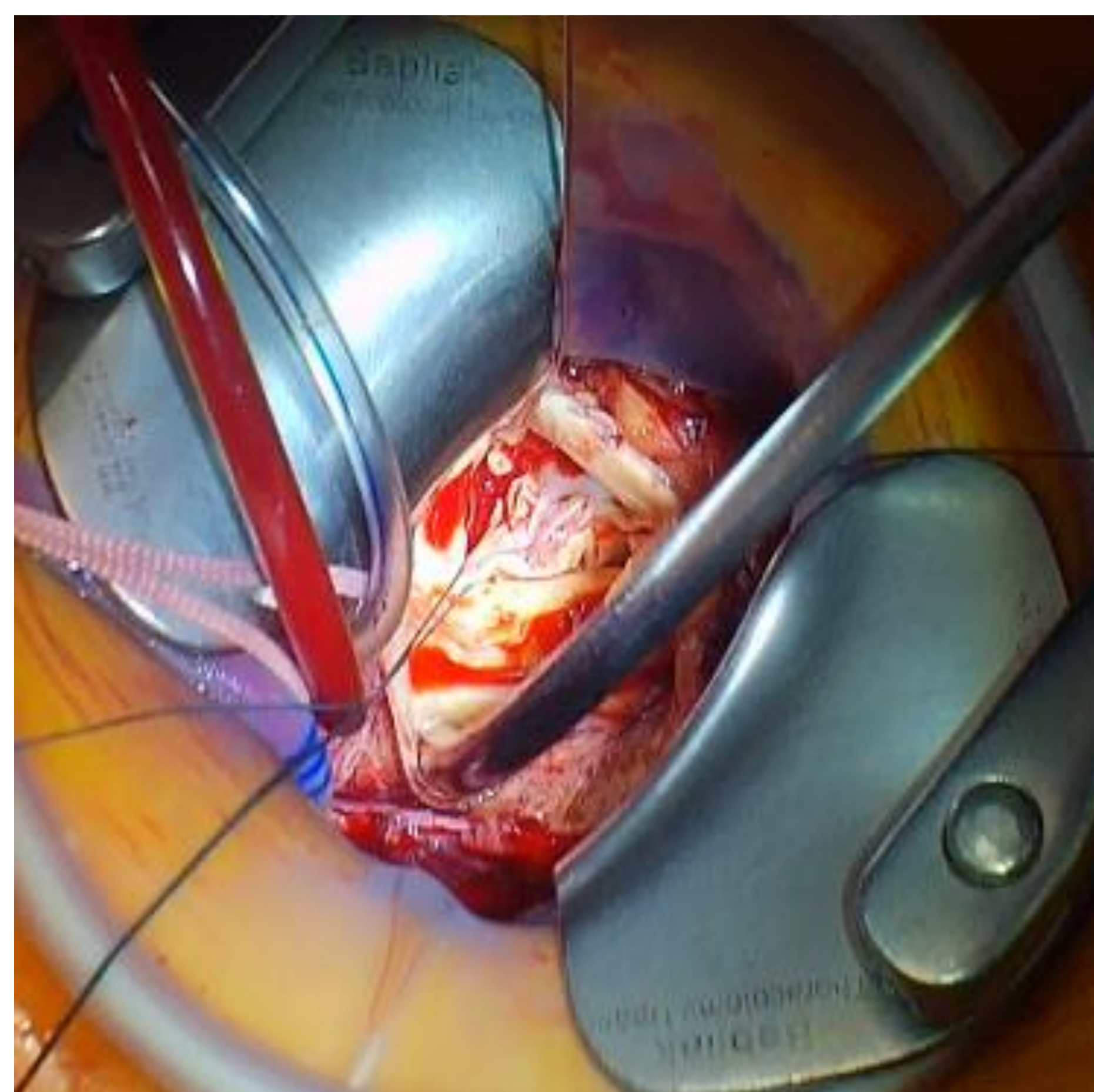
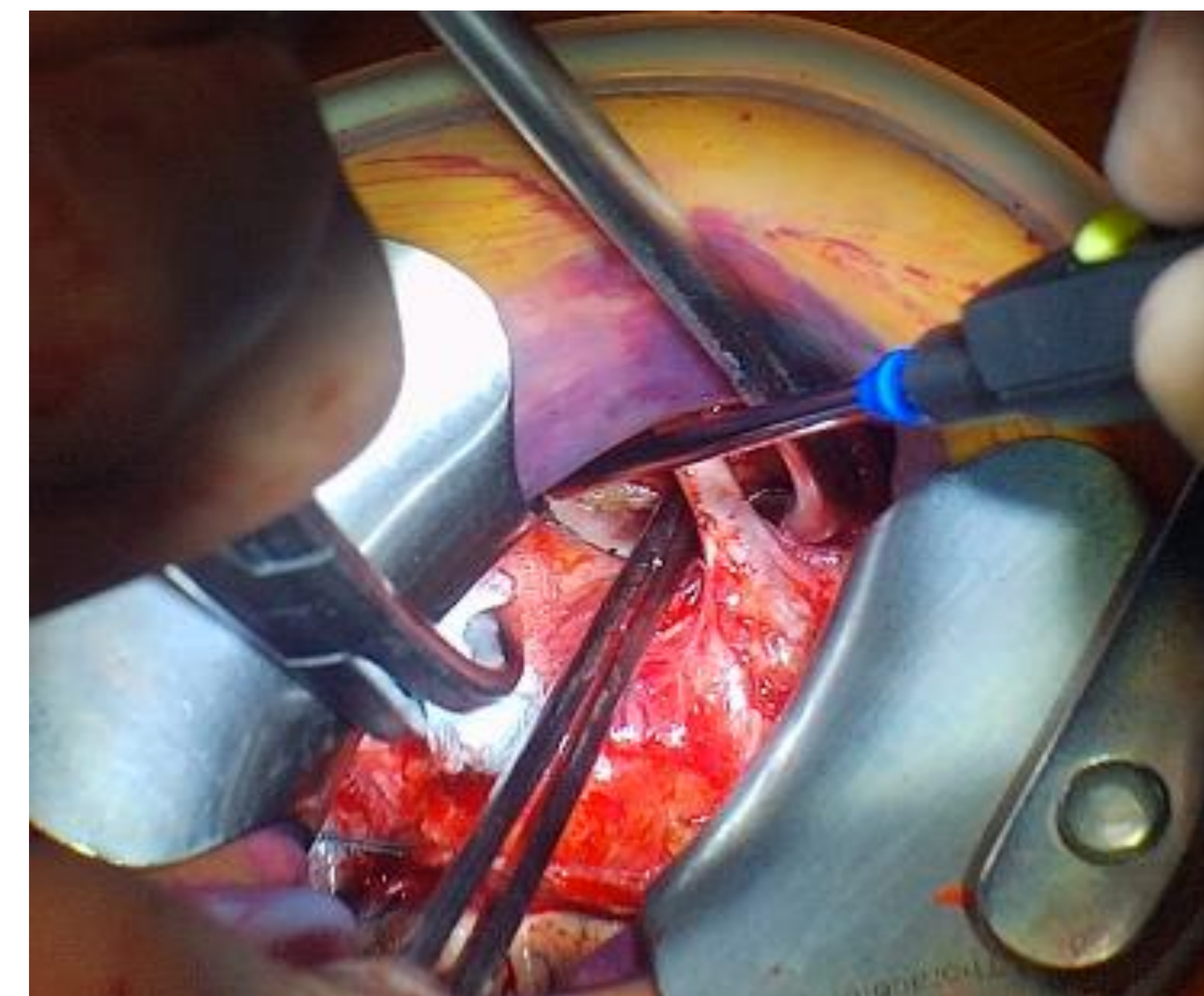
A 65-year-old male patient (BSA 2.0 m²) presented with dyspnea and chest pain corresponding to NYHA class III heart failure symptoms.

The patient had previously undergone coronary artery bypass grafting via left anterior mini-thoracotomy (TCRAT-CABG) 7 years earlier.

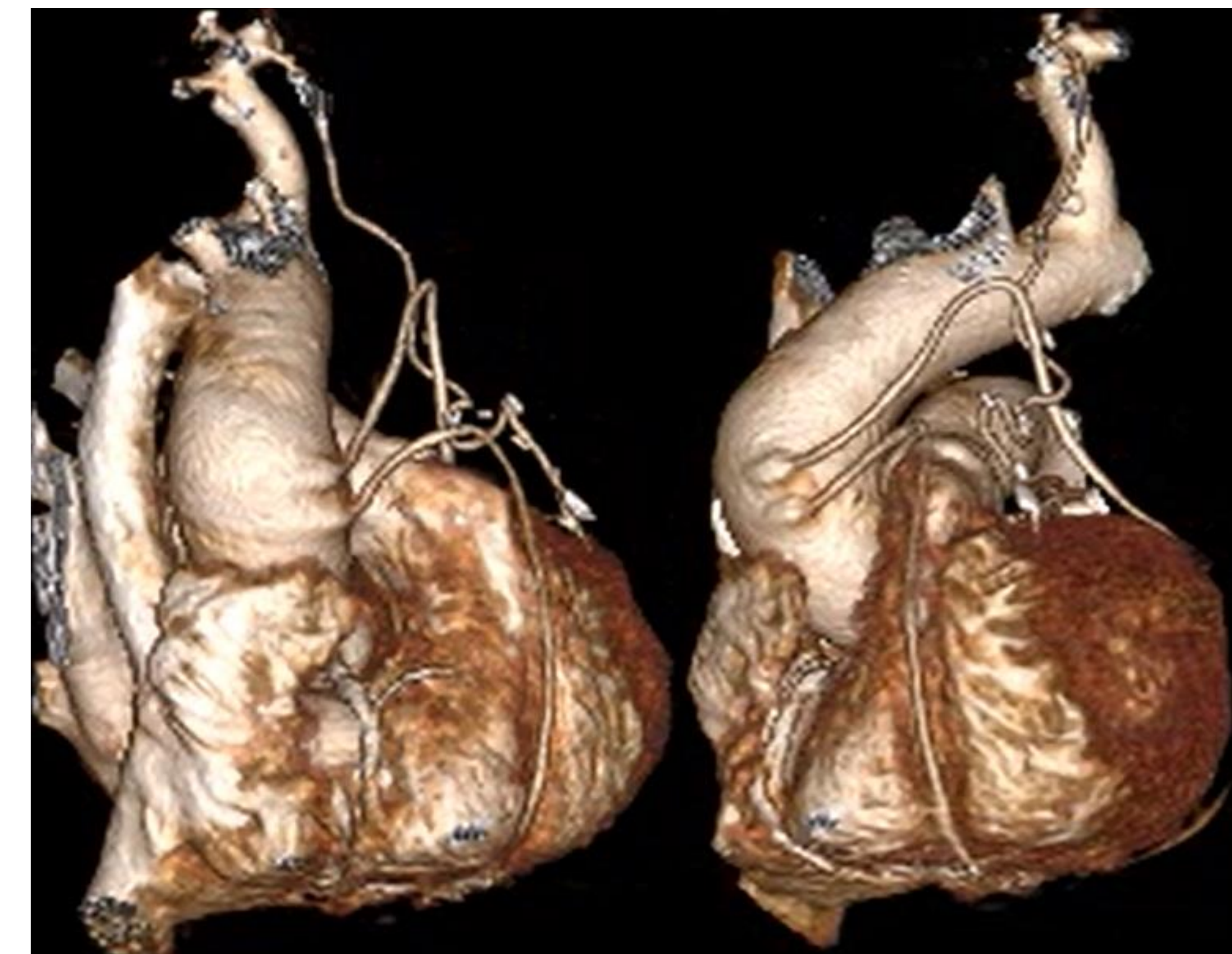
Echocardiography demonstrated severe aortic stenosis with a peak transvalvular gradient of 69 mmHg, mean gradient of 40 mmHg, and preserved left ventricular ejection fraction (60%).

Results

Postoperative echocardiography demonstrated excellent prosthetic valve function with no paravalvular leak and a peak transvalvular gradient of 19 mmHg. The postoperative course was uneventful, with total drain output of 120 mL during the first 12 hours, intensive care unit stay of 1 day, and no neurological deficits observed.



Preoperative 3D CT Reconstruction



Conclusions

With this case, we demonstrate the feasibility and convenience of performing redo cardiac surgery after a previous minimally invasive approach. Minimally invasive cardiac surgical techniques may reduce the risk of complications, bleeding, and overall mortality. However, experience with such redo cases remains limited, highlighting the need for further investigation and more extensive clinical evaluation.