Physician - Pediatric Cardiac and Vascular Surgery/Adult Congenital Heart Diseases

[MSB-26]

Minimally Invasive Right Vertical Axillary Thoracotomy for Repair of Congenital Heart Defects: Azerbaijan Experience

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Objective: This study aimed to assess the outcomes of a minimally invasive right vertical axillary thoracotomy approach for repairing various congenital heart defects in the pediatric population in Azerbaijan.

Methods: The retrospective study was conducted with 70 consecutive patients (median age: 5.5 years; range, 6 months to 13 years) who underwent repair of congenital heart defects using a minimally invasive right vertical axillary thoracotomy approach between April 2022 and September 2024. Of the patients, 44 had atrial septal defect (ASD), 13 had ventricular septal defect, seven had sinus venosus ASD with partial anomalous pulmonary venous drainage, and six had atrioventricular septal defect. The incision length ranged from 3.0 to 5.0 cm.

Results: The median weight was 15 kg (range, 6 to 41 kg). The median hospital and intensive care unit stays were 4 and 1 days, respectively. The median cardiopulmonary bypass and cross-clamp times were 51 and 23.5 min, respectively. No in-hospital deaths or conversions to median sternotomy occurred. One patient with sinus venosus ASD with partial anomalous pulmonary venous drainage experienced transient atrioventricular block, which resolved by the first postoperative day with a return to sinus rhythm. During follow-up, no late deaths, reoperations, surgery-related thoracic deformities, or breast asymmetry were observed.

Conclusion: The minimally invasive right vertical axillary thoracotomy approach can be safely employed for a broad spectrum of congenital heart defects, yielding excellent cosmetic outcomes. It represents a viable alternative to median sternotomy.

Keywords: Congenital heart defect, minimally invasive surgery.

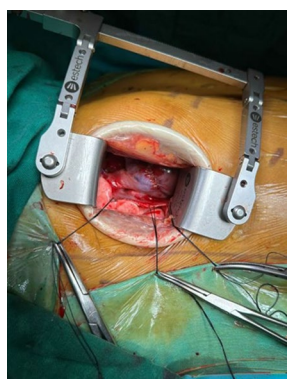

Figure 1. Intraoperative findings.

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