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

### [MÖB-03]

### Extra-Pericardial Modified Blalock-Taussig Shunt Via Sternotomy in Patients with A Right Aortic Arch

Kamran Ahmadov[1,2], Kamran Musayev[1], Tornike Sologashvili[2]

[1]*Department of Cardiovascular Surgery Merkezi Klinika, Baku, Azerbaijan*

[2]*Department of Cardiovascular Surgery, Geneva University Hospital, Geneva, Switzerland*

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**E-mail:** Dr.kamran.ahmadov@gmail.com

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**Objective:** The study aimed to describe the feasibility and results of a left modified Blalock-Taussig shunt (mBTS) through a sternotomy without opening the pericardium in patients with a right-sided aortic arch.

**Methods:** The study included eight patients (median age: 20 months; range, 10 to 56 months) who underwent a left mBTS. All mBTS procedures were performed through a median sternotomy without the use of cardiopulmonary bypass. Following sternotomy, the brachiocephalic trunk and left pulmonary artery were carefully identified and isolated without opening the pericardium. First, an end-to-side anastomosis was created between the Gore-Tex graft and the brachiocephalic trunk. Subsequently, the distal end-to-side anastomosis was performed between the graft and the left pulmonary artery. A single drain was positioned in the retrosternal space, and the sternum was closed in the standard manner.

**Results:** Six patients had tetralogy of Fallot, and two had a double-outlet right ventricle with pulmonary stenosis. The median weight was 8 kg (range, 6.1 to 12.8 kg). The procedure was feasible in all patients (Figure 1). The median shunt size was 5 mm (range, 4 to 5 mm), and the median intensive care unit stay was three days. There were no cases of early- or mid-term mortality, shunt failure, or thrombosis. Additionally, no patients developed postoperative pericardial effusion. Six out of eight patients underwent resternotomy for complete correction, with preoperative cardiac catheterization confirming shunt patency (Figure 2). Notably, no intrapericardial adhesions were observed during resternotomy.

**Conclusion:** This technique offers a significant advantage by avoiding intrapericardial adhesions, making it a viable alternative to standard sternotomy or thoracotomy approaches for mBTS in patients with a right-sided aortic arch.

**Keywords:** Congenital heart defects, tetralogy of Fallot.

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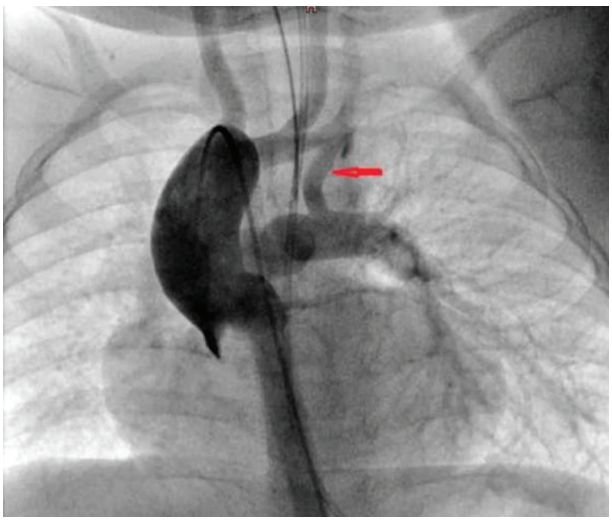

**Figure 1.** Cardiac catheterization performed to evaluate the pulmonary arteries and the shunt (arrow: modified Blalock-Taussig shunt).

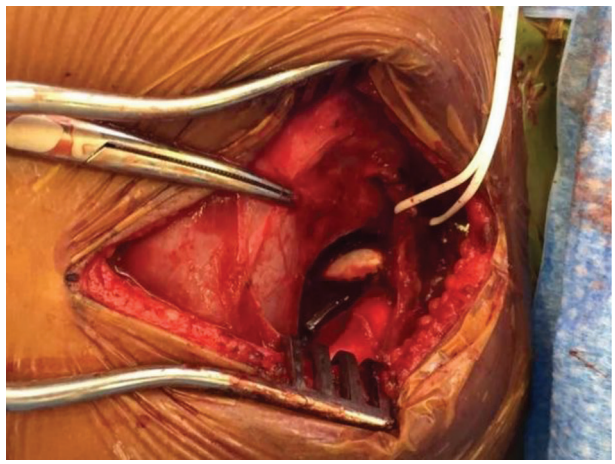

**Figure 2.** Intraoperative findings.