

Angiographically detectable infracardiac TAPVC in a 7-month-old patient who had single ventricle physiology and left modified Blalock-Taussig shunt, dextrocardia, and large midline liver

Ayna hayali dekstrocardisi, geniş horizontal karaciğeri olan tek ventrikül fizyolojisindeki sol modifiye Blalock-Taussig şantlı 7 aylık hastada anjiyografik olarak saptanabilen infrakardiyak TAPVD

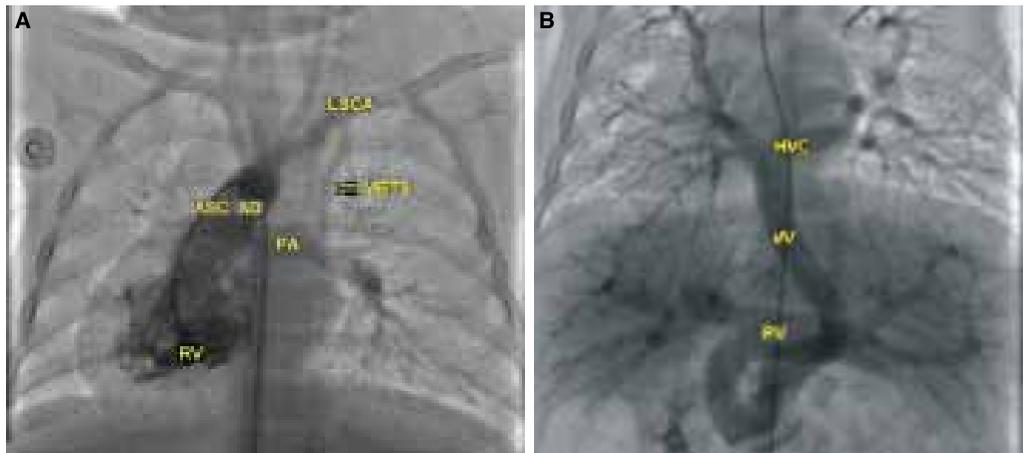
Yılmaz Yozgat
Önder Doksöz
Cem Karadeniz
Timur Meşe
Department of
Pediatric Cardiology,
İzmir Dr. Behcet Uz
Children's Hospital,
İzmir

A term female baby weighing 3150 g was referred to our institution with a pre-diagnosis of central cyanosis and dextrocardia. Saturation was 81% at room air. Transthoracic echocardiography (TE) revealed dextrocardia, midline liver, complete atrioventricular septal defect (RV>LV, unbalanced), pulmonary atresia, and patent ductus arteriosus. Prostaglandin E1 (PGE1) infusion was started. The patient, who had confluent pulmonary arteries, underwent left modified Blalock-Taussig (LMBT) shunting operation three days later. Oxygen saturation was 85% after shunting. The patient's oxygen saturation was between 80-82% in the first six-month follow-up period, and the shunting was seen to work well echocardiographically. The patient, who was accepted to have single ventricle physiology, underwent cardiac catheterization at the age of seven months in order to prepare for the Glenn operation. The right femoral artery was accessed with 4F cobra catheter; the arcus aorta was accessed retrogradely through the descending aorta; and the LMBT shunt between left subclavian-left pulmonary artery and left pulmonary artery were accessed. The LMBT shunt between the left subclavian-left pulmonary artery was seen to be patent, and pulmonary arteries were seen to be well-developed (Fig. A, Video 1*). On imaging of 2 cc/kg of non-ionic contrast medium, pulmonary veins were seen to be opened to the vertical vein through pulmonary venous confluence in the venous return phase and drained into the enlarged portal vein.

confluence in venous return phase and drained into an enlarged portal vein; they did not show obstruction (Fig. B, Video 2*). It was attempted to show infracardiac total anomalous pulmonary venous return (TAPVR) echocardiographically by performing echocardiographic imaging after cardiac catheterization; however, this was not possible due to large midline liver. The first surgery session was performed based only on the result of the TE studies. In fact, it is controversial to operate on patients with certain cardiac pathologies based solely on TE studies. The detection of the TAPVR anomaly in our case on angiographic evaluation performed in preparation for the second operation is a good example of this issue. Following consultation to Cardiac Surgery, it was decided to perform bidirectional Glenn shunting and infracardiac TAPVR repair. In conclusion, the opening of the pulmonary veins to the left atrium should always be evaluated on TE examination. For patients undergoing surgery based solely on TE results, it should be taken into account that the echocardiographic examination may have a margin of error. In addition, pulmonary venous return should be imaged during catheter angiography by prolonging the injection of opaque material into the right heart.



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Figures– (A) Patent left modified Blalock-Taussig shunt (MBTS). **(B)** Pulmonary veins were seen to be opened to the vertical vein through pulmonary venous confluence in the venous return phase and drained into the enlarged portal vein. *Supplementary video files associated with this presentation can be found in the online version of the journal.