

CASE IMAGE

Connection between the left ventricular outflow tract and the main pulmonary artery in a patient with a history of tetralogy of Fallot total correction and aortic valve replacement

Fallot tetrolojis ve aortik kapak replasmanı öyküsü olan hastada sol ventrikül çıkış yolu ve pulmoner arter arasındaki bağlantı

Ali Hosseinsabet¹

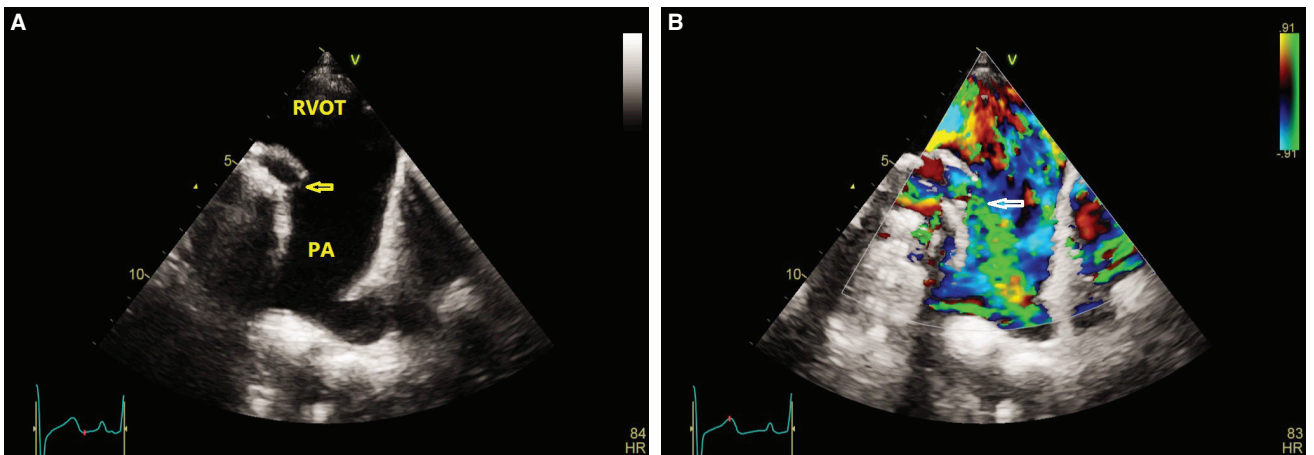
Khalil Forozannia²

¹Department of Cardiology, Tehran Heart Center, Tehran University of Medical Sciences, Tehran, Iran

²Department of Cardiac Surgery, Tehran Heart Center, Tehran University of Medical Sciences, Tehran, Iran

A 14-year-old adolescent was admitted to the hospital for pulmonary valve replacement. He had a history of tetralogy of Fallot total correction and atrial septal defect closure at 6 years old and aortic valve replacement with bileaflet mechanical aortic valve replacement due to aortic regurgitation at 8 years of age in

another center. Preoperative transthoracic echocardiography showed preserved left ventricular systolic function (ejection fraction: 50%), severe right ventricular enlargement with moderate systolic dysfunction, a mechanical aortic valve prosthesis with normal leaflet motion and mild paravalvular leakage, and remnants of the pulmonary valve with severe pulmonary regurgitation. Furthermore, there was a connection between the left ventricular outflow tract (4 mm) and the medial side of the main trunk of the pulmonary artery with a turbulent systolic flow observed on color Doppler study with a peak pressure gradient of 110 mmHg. This finding was confirmed in the operating room, and the defect was repaired. Moreover, the pulmonary valve was replaced with a mechanical bileaflet prosthesis. A connection between the left ventricular outflow tract and the pulmonary artery as a complication of tetralogy of Fallot total correction or aortic valve replacement is uncommon; however, it should be kept in mind at the time of echocardiographic evaluation of these patients.



Figures– (A, B) Connection between the left ventricular outflow tract and the main trunk of the pulmonary artery (arrow) as a complication that appeared as a turbulent flow on a color flow Doppler study.

PA: Pulmonary artery; RVOT: Right ventricular outflow tract.

*Supplementary video files associated with this presentation can be found in the online version of the journal.