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FIT Clinical Decision Making

PULMONARY REGURGITATION IN REPAIRED TETRALOGY OF FALLOT

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 3:45 p.m.-4:30 p.m.

Session Title: FIT Clinical Decision Making: Imaging and Valvular Heart Disease
Abstract Category: Non Invasive Imaging
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Background: Tetralogy of Fallot (TOF) is the most common form of cyanotic congenital heart disease. With advances in surgical repair techniques, the majority of patients with TOF are now surviving into adulthood. Pulmonary regurgitation (PR) is increasingly recognized as a late complication of TOF repairs and can result in right heart failure, symptomatic arrhythmias, and sudden cardiac death.

Case: A 47 year old male with a history of Tetralogy of Fallot status post left sided Blalock-Taussig shunt at age 7 months old and unknown surgical repair at age 7 presented with 2 months of shortness of breath, frequent palpitations, intermittent chest pain, and one episode of syncope. Vital signs were significant for a heart rate ranging from 100 to 120 bpm. Physical exam was significant for 3/6 holosystolic murmur loudest at the left upper sternal border, 3/4 early diastolic murmur also at the left upper sternal border, S3, and right sided heave. EKG showed sinus tachycardia with a right bundle branch block and QRS duration of 192ms. Chest x-ray showed right ventricular enlargement and prominent pulmonary arteries. Holter monitor revealed sinus tachycardia with multiple premature atrial and ventricular complexes.

Decision Making: Based on the patient's clinical presentation, we had a high index of suspicion for significant pulmonic regurgitation. Transthoracic echocardiogram was performed with careful assessment of the pulmonic valve. The echocardiogram revealed an overriding aorta, VSD patch, moderate right ventricular systolic dysfunction with severe dilation, and septal flattening in diastole. Severe PR with branch pulmonary artery flow reversal was noted. Cardiac MRI confirmed the presence of a valved conduit with severe PR. The patient underwent pulmonary valve replacement with a 27mm Mosaic valve. Patient tolerated the surgery well and his symptoms resolved.

Conclusion: This case illustrates the importan e of recognizing the late complications associated with TOF repair, especially PR. Careful assessment with echocardiography is an important first step in detecting PR in patients with TOF and new symptoms of right heart failure or arrhythmias.