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INTERESTING ECHOCARDIOGRAM IN A CARDIAC TRANSPLANT PATIENT

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Brief History

CM is a 35-year-old male who underwent an orthotopic heart transplant ten years prior secondary to idiopathic dilated cardiomyopathy. Three years ago, he had undergone percutaneous coronary intervention, and a drug-eluting stent was placed in the left anterior descending coronary artery. He also had a history of hypertension, hypercholesterolemia, and gout. He presented to the Methodist DeBakey Heart and Vascular Center for routine transthoracic two-dimensional (2D) echocardiography with Doppler and left heart catheterization with coronary angiography as part of a routine 10-year graft surveillance. He was asymptomatic, specifically denying chest pain, dyspnea, fluid retention, or palpitations.

Medications

Magnesium oxide, clopidogrel, diltiazem, aspirin, prednisone, tacrolimus, trimethoprim and sulfamethoxazole, sirolimus, atorvastatin, temazepam

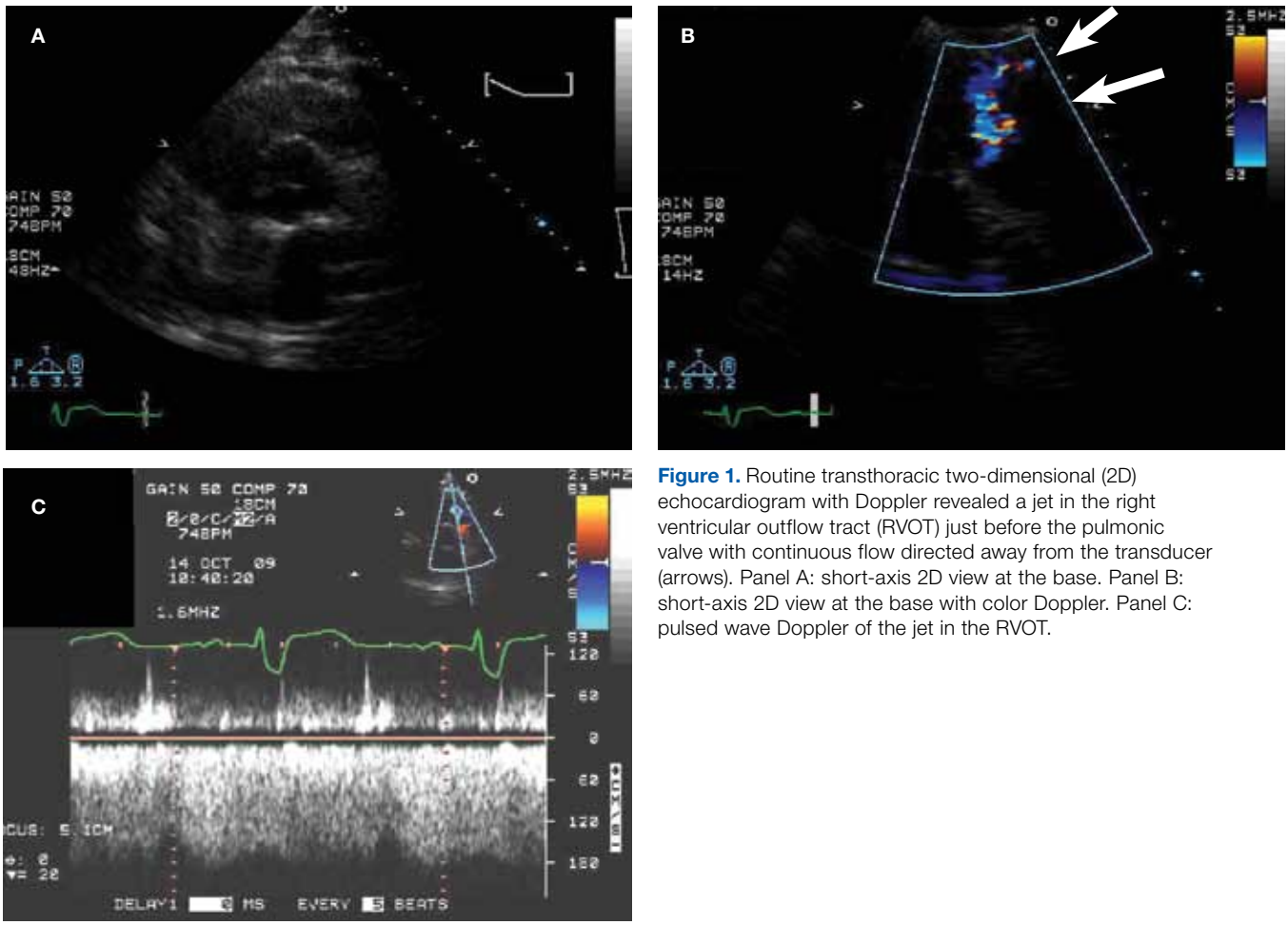

Figure 1. Routine transthoracic two-dimensional (2D) echocardiogram with Doppler revealed a jet in the right ventricular outflow tract (RVOT) just before the pulmonic valve with continuous flow directed away from the transducer (arrows). Panel A: short-axis 2D view at the base. Panel B: short-axis 2D view at the base with color Doppler. Panel C: pulsed wave Doppler of the jet in the RVOT.

Physical Exam

- Height: 72 inches
- Weight: 216 lb.
- B/P 142/85
- HR 73
- Oral Temp. 98.2 F
- No JVD
- Carotids +2 without bruits
- Lungs: clear to auscultation bilaterally
- Cardiovascular: regular rate and rhythm with normal S1, split S2 that increases with inspiration, 2/6 holosystolic and diastolic murmer heard best at the right and left upper sternal border
- Abdomen: soft, positive bowel sounds, no hepatosplenomegaly
- Extremities: no clubbing, cyanosis, or edema, intact peripheral pulses
- ECG: normal sinus rhythm, right bundle branch block, non-specific ST/T abnormality
- Echocardiogram: Figure 1
- Coronary angiography: Figure 2

Follow-Up Plan

Given his asymptomatic status, no specific therapy is indicated for the coronary cameral fistula (RCA marginals to RVOT). Given that he is a heart transplant recipient, he will continue to follow up every six months as part of the heart transplant program to assess graft function.

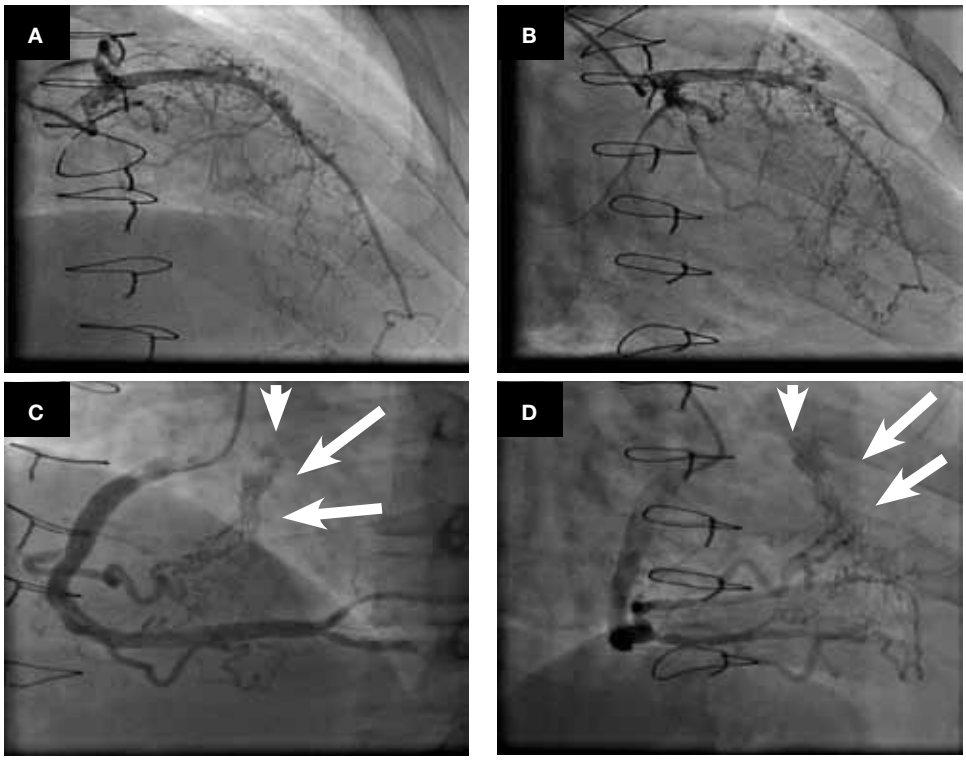

Figure 2. Coronary angiography revealed a "web" of vessels arising from the marginal coronary arteries and dumping into a large vascular structure lying close to the aorta (arrows). Panel A: Right anterior oblique (RAO)/cranial projection of the left anterior descending (LAD) coronary artery. Panel B: RAO projection of the LAD and left circumflex coronary arteries. Panel C: LAO projection of the right coronary artery (RCA). Panel D: RAO projection of the RCA.