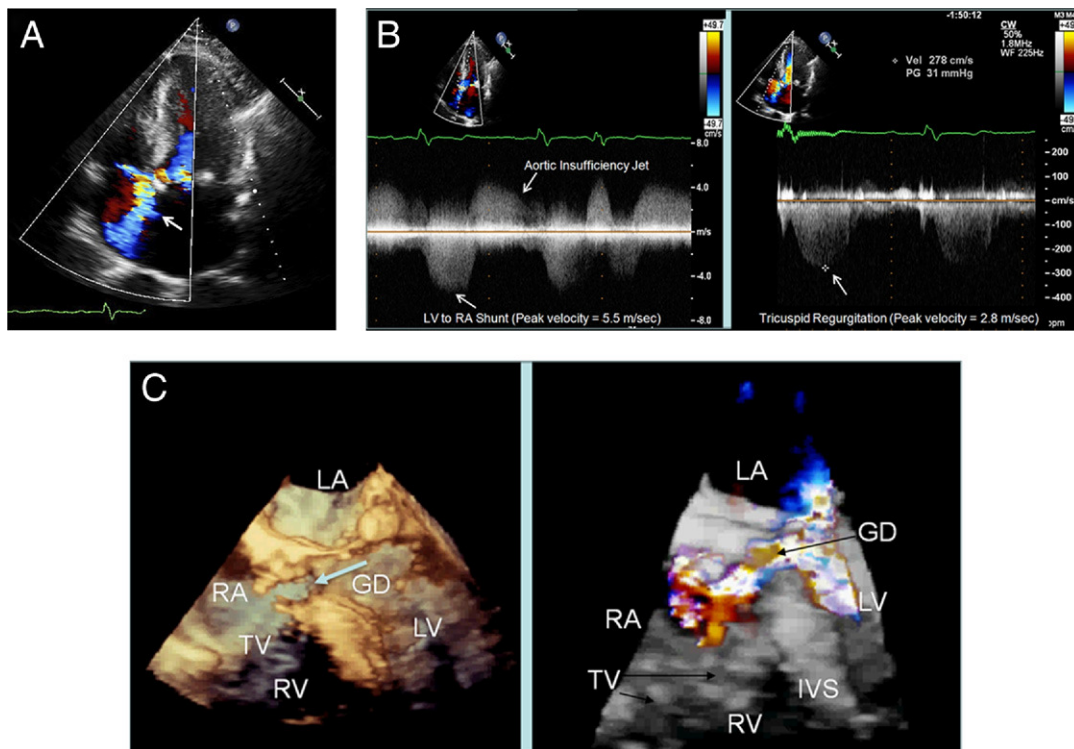


IMAGES IN CARDIOLOGY

Acquired Gerbode Defect After Aortic Valve Replacement

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A 78-year-old man with bioprosthetic aortic valve replacement presented with leg edema. Two-dimensional transthoracic echocardiography revealed a high-velocity systolic jet entering the right atrium (RA) initially mistaken for tricuspid regurgitation, thus resulting in incorrect diagnosis of pulmonary hypertension (A). Spectral Doppler distinguished a normal-velocity tricuspid regurgitation jet from an apparent left ventricle (LV)-to-RA shunt (B). Three-dimensional transesophageal echocardiography correctly demonstrated a jet taking a serpiginous course from the LV into the RA, consistent with a Gerbode defect (GD) (C, Online Videos 1, 2, and 3). At surgery, the defect was confirmed and repaired.

An LV-to-RA communication is either congenital or the result of endocarditis, valvular surgery, or myocardial infarction. Such a communication is anatomically possible, because normally the tricuspid valve (TV) is apically displaced relative to the mitral valve. LA = left atrium; IVS = interventricular septum; RV = right ventricle.