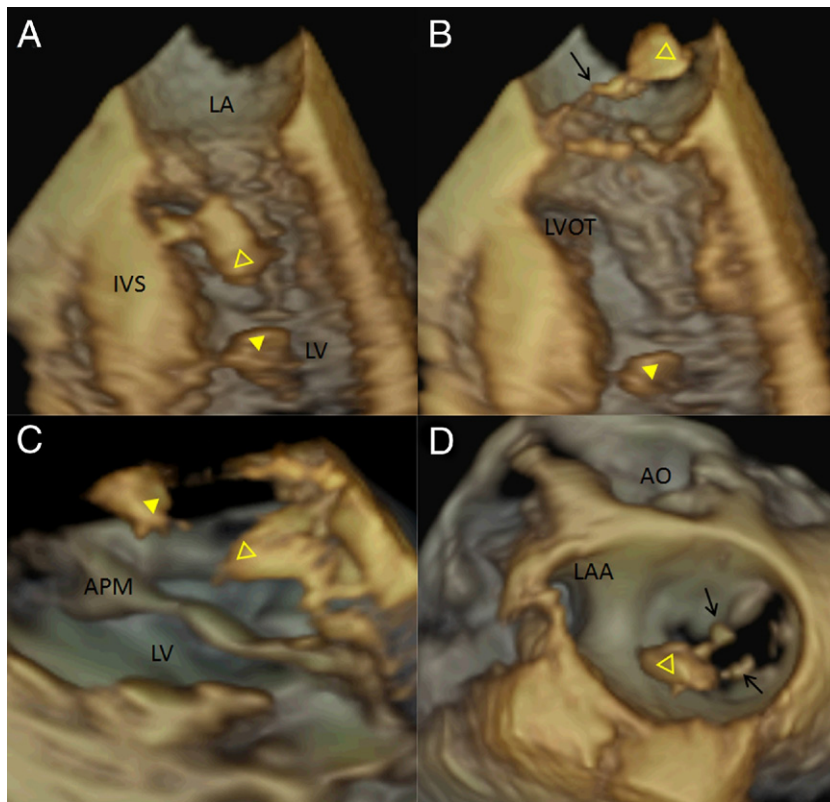


IMAGES IN CARDIOLOGY

3-Dimensional Transesophageal Echocardiographic Assessment of Papillary Muscle Rupture Complicating Acute Myocardial Infarction

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A 51-year-old man presented after a 2-day history of angina in cardiogenic shock with signs of acute inferoposterior myocardial infarction. Acute severe mitral valve regurgitation due to complete posteromedial papillary muscle rupture was diagnosed by echocardiography. Coronary angiography showed right coronary artery occlusion. Pre-operative 3-dimensional transesophageal echocardiography was performed to comprehensively assess the localization and extent of papillary muscle rupture. Longitudinal views (midesophageal [A and B, Online Video 1]; transgastric [C, Online Video 2]) enabled the dynamic assessment of papillary muscle ruptured head (open triangles) and the remaining basal insertion (solid triangles). Mitral valve flail with chordal attachment to the ruptured papillary muscle head was visualized from the atrial perspective (D, Online Video 3).

Three-dimensional transesophageal echocardiography provides precise anatomic information that can assist surgeons in optimal decision making between mitral valve replacement or papillary muscle reconstruction. AO = aorta; LA = left atrium; LV = left ventricle; LVOT = left ventricle outflow tract.