

Myocardial Infarction Complicated with Ventricular Rupture and Pseudo-Aneurysm Formation

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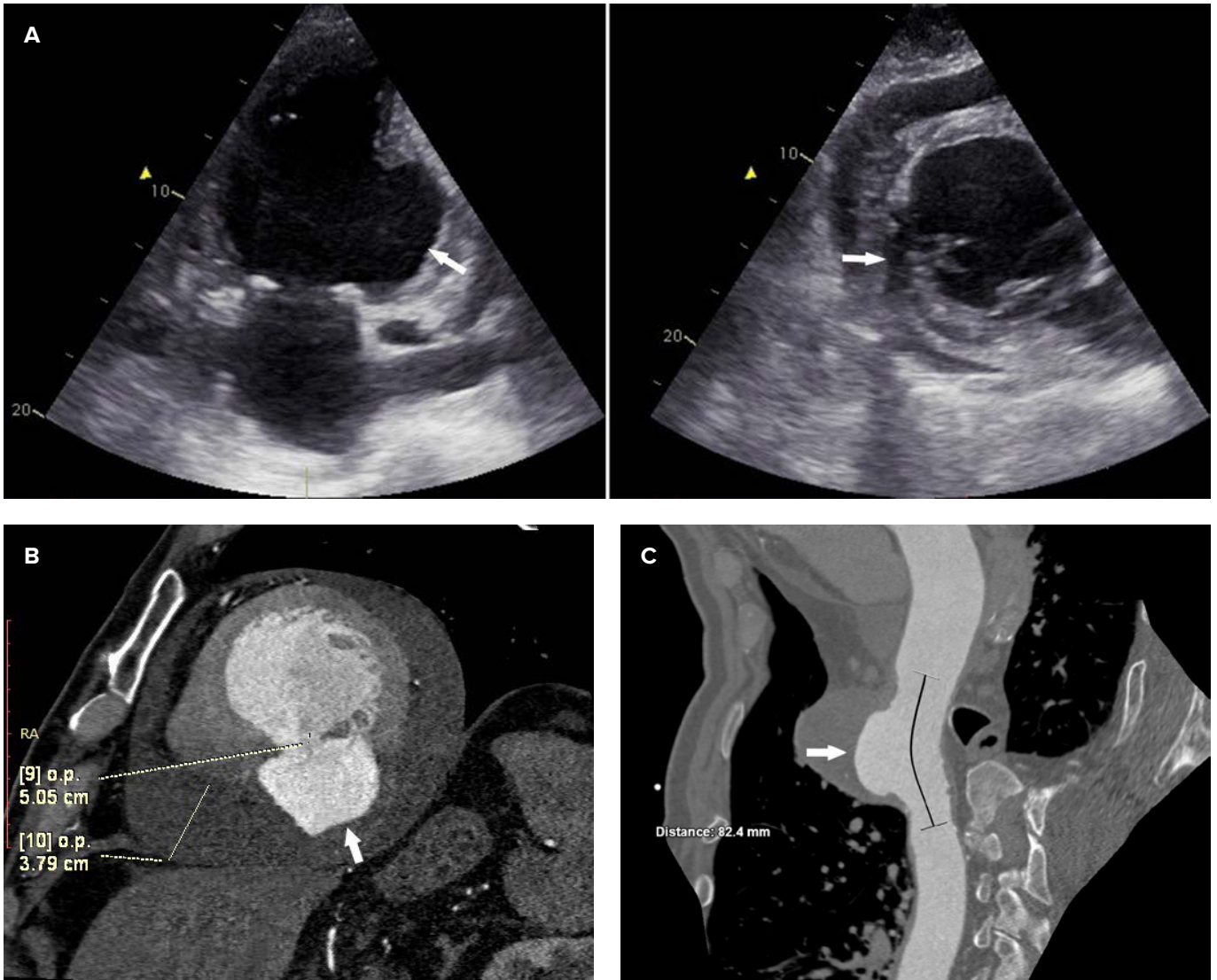
A 66-year-old man presented at the emergency room with severe pain, dyspnea, dizziness, and a significant medical history for cardiovascular disease including multiple episodes of constrictive chest pain that started 3 weeks before admission, ischemic heart disease, three previous ischemic strokes, arterial hypertension, as well as prostate adenocarcinoma treated with radio- and chemotherapy.

The clinical examination revealed hypotension (70/40 mmHg), tachycardia (134 beats per minute), and right body motor deficit; vesicular breath sounds with wet pulmonary crackles in the lower region of the pulmonary projections, bilaterally, and a systolic murmur in the mitral auscultation point.

The electrocardiogram was interpreted as sinus rhythm with a heart rate of 134 beats per minute, right bundle branch block, and qS waves with negative T waves in the inferior leads. The laboratory analyses showed mild anemia, hypertriglyceridemia, myocardial necrosis enzymes at the upper limit values — NT-proBNP 6,748 pg/mL, D-dimer >5.00 µg/mL. The echocardiographic examination found a systolic depressed function of the left ventricle with lateral wall hypokinesia, a pericardial collection with concentric distribution of 34 mm, partial right atrium and mid/end-diastolic right ventricle collapse, a pseudoaneurysm of the posterior wall of the left ventricle with a thrombus of 50 mm, as well as stage III ischemic mitral regurgitation (Panel A). The computed tomography angiography and cardiac computed tomography scan revealed the left ventricle pseudoaneurysm and thrombus mass (Panel B), as well as new findings such as a dissected aneurysm at the level of the ascending aorta (82.4 mm) with a circulating lumen of 45 mm (Panel C).

The patient was diagnosed with recurrent inferior myocardial infarction, recently complicated with a ruptured inferior-wall pseudoaneurysm of the left ventricle, hemorrhagic pericardial effusion, a hemodynamically significant ischemic mitral regurgitation, and aortic dissection.

In post-myocardial infarction patients, with complications such as left ventricular pseudoaneurysm, cardiovascular surgery recommendations include a delayed surgical correction that should follow a complete stabilization of the vital param-



eters of the patient and diagnostic coronary angiography.^{1,2} Noninvasive imaging methods can be used for accurately diagnosing and assessing myocardial infarction complications, including transthoracic and transesophageal echocardiography and cardiac computed tomography.³ The rupture of a left ventricular pseudoaneurysm is a rare and fatal complication of myocardial infarction.^{4,5}

CONFLICT OF INTEREST

Nothing to declare.

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