

Urgent bedside echocardiography in diagnosis of acute massive pulmonary embolism presenting with cardiogenic shock — case report

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We are presenting the case of a 51-year-old man who has been admitted at our clinic with dyspnea, cardiogenic shock and severe pain and swelling of the left leg. At the admission he was cyanotic, severely hypotensive, with tachypnea, an oxygen saturation of 70%. An acute massive pulmonary embolism was suspected, and an emergency bedside transthoracic echocardiogram was performed. Bedside echocardiography showed significantly enlarged right ventricle (46 mm tricuspid annular size), hypokinesia of the free right ventricular wall and increased pulmonary artery size (34 mm), with signs of RV overload. There was large mobile thrombus with dimensions (34x37 mm) prolapsing from right ventricle to the right atrium. Severe tricuspid regurgitation, with dilated right atrium and dilated vena cava inferior — 24 mm were found. Indirect estimation of the pulmonary hypertension with the value of the maximal velocity of the tricuspid regurgitation showed increased pulmonary pressure (estimated systolic pulmonary atrial pressure — SPAP was 59 mmHg). Color Duplex sonography of lower extremities was also performed at the bed site with the finding of non compressible left common femoral vein, which was consistent with the deep vein thrombosis. D-dimers were significantly increased (>4.500 ng/l). Multislice computed tomography performed next day confirmed central filling defect of the left pulmonary artery consistent with acute thrombus. Based on the patient's clinical condition and the echocardiographic find-

ings, he has been treated with fibrinolysis therapy with alteplase. Control echocardiography performed three days after fibrinolytic therapy showed decrease in SPAP pressure from 59 mmHg to 40 mmHg, moderate tricuspid regurgitation, normal right ventricular size and function. The patient had excellent clinical recovery and was discharged from the hospital after 20 days. This case confirms the role of urgent bedside echocardiography in fast diagnosis of acute pulmonary embolism, which leads to proper management and favorable patient outcome.

KEYWORDS: urgent echocardiography, pulmonary embolism, cardiogenic shock.

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