

Successful thrombolytic treatment of right sided massive intracardiac thrombus and pulmonary embolism

Skuteczne leczenie trombolityczne dużej skrzepliny w prawym sercu i zatorowości płucnej

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A 67-year-old male patient was admitted to the emergency room with progressive dyspnoea. Blood gas analysis revealed hypoxia and hypocarbia. D-dimer was high. He was haemodynamically stable. Transthoracic echocardiography (TTE) showed massive right ventricular and mobile atrial thrombi and also right sided enlargement and flattening of the interventricular septum. Systolic pulmonary artery pressure was calculated as 70 mm Hg (Fig. 1A, B). Transoesophageal echocardiographic (TEE) examination was performed for the detailed examination of the thrombi (Fig. 2A, B). Thorax computerised tomography showed thrombus in the right segmentary pulmonary arteries. Intravenous heparin treatment was started immediately. No deep venous thrombus was detected in a lower extremity venous Doppler examination. Malignancy evaluation revealed nothing. The patient was consulted for cardiovascular surgery for the removal of the massive right sided cardiac thrombus. The cardiovascular surgeons did not accept the operation. We decided upon thrombolytic treatment for this patient. The patient and his relatives were informed about the disease and the risk of the thrombolysis. 25 mg tissue plasminogen activator (TPA) was administered within 6 h as a slow infusion every other day up to a total of 100 mg TPA. Heparin infusion was stopped during the thrombolysis but started after the thrombolysis to decrease the bleeding complications. TTE was repeated after every thrombolytic therapy. A progressive decrease in size of thrombus was detected in serial echocardiographic examinations. After termination of the last dose of the thrombolytic regimen, TEE was repeated. TEE examination showed that the thrombus in the right ventricular apex and the mobile thrombus in the right atrium had totally disappeared (Fig. 3A, B). The right side of the heart had become normal in size, and pulmonary systolic pressure had decreased to 30 mm Hg. The patient was discharged after anticoagulation with coumadin. There is no consensus regarding the optimal treatment for patients with right sided heart thrombi. The presence of a right heart thrombus with pulmonary thromboemboli carries an increased mortality rate compared to pulmonary thromboemboli alone, but there is no optimal medical treatment for this difficult clinical situation (Rose P et al. Chest, 2002; 121: 806–8141). Our case shows that thrombolysis with a low dose infusion over a longer duration may be a treatment option for massive right sided cardiac thrombi.

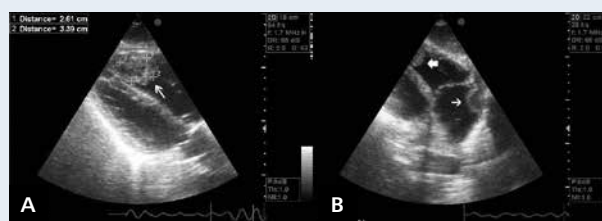


Figure 1. A, B. Transthoracic echocardiographic views show thrombus in the right ventricle and atrium. Right chambers of the heart are dilated

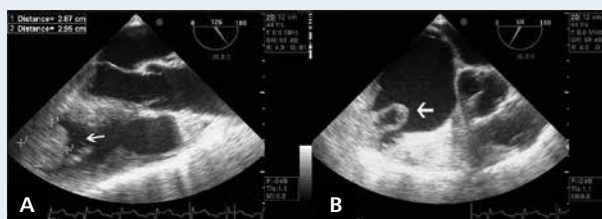


Figure 2. A, B. Transoesophageal echocardiographic views show thrombus in the right ventricle and right atrium

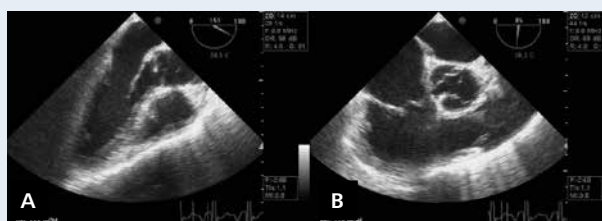


Figure 3. A, B. After completion of thrombolytic regimen, thrombus was dissolved completely and the right chambers of the heart decreased in size and became normal

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Conflict of interest: none declared