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Right heart free-floating thrombus after leg injury

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DESCRIPTION

A 70-year-old male patient presented to our hospital for investigation of chest pain. He had a history of muscle injury at the right leg during farm work 10 days earlier. Two dimensional (2D) and three (3D) transthoracic echocardiographic examination visualised enlargement of right heart chambers, with a huge wormlike free-floating thrombus, approximately 7 cm in length, in them (figure 1A,B). Due to the increased risk of an acute massive pulmonary embolism a full dose of 40 mg of tenecteplase was administered intravenous bolus without delay. In a new transthoracic echocardiographic examination immediately after the fibrinolysis the thrombus had been completely dissolved (figure 1C). B-mode and Doppler ultrasonography of the lower limbs demonstrated residual thrombus in the right popliteal vein (figure 1D) at the region of the muscle injury, while CT scanning revealed evidence of small pulmonary embolism (figure 1E,F). The patient was treated with unfractionated heparin (UFH) initially, which was starting on the first day. Acenocoumarol was added on the second day and UFH was disjunction when international normalised ratio >2. Based on guidelines, thrombolysis in

acute pulmonary embolism is indicated in cases of haemodynamic instability, cardiogenic shock and persistent arterial hypotension.¹ However, in case of free-floating right heart thrombus there are insufficient data regarding lytic drugs. The widely used thrombolytic agents in pulmonary embolism are urokinase, streptokinase and recombinant tissue plasminogen activator, while with the short acting tenecteplase the experience is limited. This case presents the usefulness of 2D and 3D transthoracic echocardiography in the diagnosis of free-floating right heart thrombi and the potential benefit from the bolus administration of a short acting fibrinolytic agent, in order to eliminate the risk of a massive pulmonary embolism with catastrophic results for the patient.

Competing interests None.

Patient consent Obtained.

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Figure 1 (A, B)Two dimensional (2D) and three (3D) transthoracic echocardiographic (four chamber view) examination visualised enlargement of right heart chambers, with a huge wormlike free-floating thrombus, approximately 7 cm in length, in them. (C) In a new transthoracic echocardiographic (four chamber view) examination immediately after the fibrinolysis the thrombus had been completely dissolved. (D) B-mode and Doppler ultrasonography of the lower limbs demonstrated residual thrombus in the right popliteal vein. (E, F) CT scanning revealed evidence of small pulmonary embolism.