A four-chamber in transit heart thrombus in a pregnant woman with acute pulmonary embolism

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A 32-year-old pregnant woman, at week 25, was admitted for acute chest pain. On physical examination, arterial blood pressure was 120/80 mm Hg, and respiratory rate was 26/minute (min). Arterial blood gas measurements were: \( \text{PaO}_2 = 75 \text{ mm Hg} \), \( \text{PaCO}_2 = 26 \text{ mmHg} \), pH=7.47. High-sensitivity troponin T was 16 pg/ml (reference value<14 pg/ml). The electrocardiogram showed sinus tachycardia 110/min and negative T-waves in anterior leads. Lower-limb ultrasound documented a left femoral-popliteal deep-vein thrombosis. Trans-thoracic echocardiography revealed an enlarged and hypokinetic right ventricle with the McConnell sign, a small left ventricle, a diastolic dyskinesia of the interventricular septum, and a huge mobile worm-like thrombus in both the atrial cavities, prolapsing into both ventricles. An immobile fragment of the thrombus could also be seen into the apex of the right ventricle (▶Figure 1, ▶Figure 2 and Suppl. Video, available online at www.thrombosis-online.com). The Doppler-derived pulmonary artery systolic pressure (PAsP), according to Bernoulli equation, was 52 mm Hg. A CT scan was not considered mandatory since the diagnosis of pulmonary embolism was clear. The patient was treated with intravenous heparin and transferred to a cardiac surgery department where an emergency thrombectomy was planned on the basis of the echocardiographic images. At cardiac surgery, a 23-cm long thrombus, crossing the interatrial septum through a patent foramen ovale (FO) was removed and the patient FO was sutured. Both the patient and the fetus had an uncomplicated postoperative course. At pre-discharge echocardiography, both right ventricle and PAsP were normalised. The patient was discharged in good clinical condition on low-molecular-

Figure 1: Apical four-chamber view, diastolic frame. Huge, worm-like, right heart thrombus extending into the left atrium through the foramen ovale and prolapsing into both ventricles. A clot is also visible in the apex of the right ventricle.

Figure 2: Apical four-chamber view, RV= right ventricle, LV= left ventricle, RA= right atrium, LA= left atrium, IAS=interatrial septum, TV= tricuspid valve, MV= mitral valve, TH= thromboembolus.
weight heparin. The delivery of the baby by a caesarean section was uneventful. To our knowledge, this is the first case of successfully surgical embolectomy in a pregnant woman with acute pulmonary embolism and four-chamber in transit heart thrombus.

Conflicts of interest
None declared.

References