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

Franco Casazza; Carla Caponi; Serena Mignoli

1Division of Cardiology, San Carlo Borromeo Hospital, Milan, Italy; 2Division of Internal Medicine, Valli del Noce Hospital, Cles (TN), Italy

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: \( \text{PaO}_2 = 75 \text{ mm Hg, PaCO}_2 = 26 \text{ mm Hg, pH}=7.47 \). 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 femoropopliteal 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