Simultaneous massive pulmonary embolism and acute myocardial infarction, associated with patent foramen ovale

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A 58-year-old man was admitted to the Catharina Hospital Eindhoven because of an out-of-hospital cardiac arrest after a period of intense pain in the left leg. 12-lead ECG showed ST-segment elevation in lead V2–V5, II, III, and AVF (Panel B). Emergent coronary and arterial angiography demonstrated a thrombus in the distal left anterior descending (Panel D) and an occlusion in his left femoral artery (Panel E). Hereafter, the patient became haemodynamically and pulmonary unstable. Transoesophageal echocardiography showed a dilated right ventricle, an abnormally moving interventricular septum and a shift of the inter atrial septum towards the left side indicating elevated right atrial and right ventricular pressure. Furthermore, a patent foramen ovale (PFO) was suspected. CT pulmonary angiography showed a saddle pulmonary embolus (Panel A). Thrombolysis was successfully performed. The patient recovered completely and was discharged after 2 weeks. Transoesophageal echocardiography was repeated and confirmed a PFO (Panel C). We did not find a source for embolization or a hypercoagulable state. Simultaneous saddle pulmonary embolism, peripheral embolism, and acute myocardial infarction is a very rare phenomenon. We hypothesize paradoxical embolisms related to his PFO to be the mechanism of this triad of vascular occlusion. We started with oral anticoagulant therapy and decided not to close the PFO. The patient is doing well now 1 year after this episode.