Massive pulmonary embolism and atrial mass attached to permanent transvenous lead

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A 41-year-old man, with a history of non-ischaemic dilated cardiomyopathy (DCM) and an automatic implantable cardioverter defibrillator (AICD), was admitted to our Department for worsening of heart failure. During the hospitalisation, his clinical status worsened with severe hypotension and dyspnoea.

Transthoracic (Fig. 1) and transoesophageal echocardiography (Fig. 2), showed a mobile thrombus in the right atrium (RA), attached to the permanent transvenous lead. A chest CT was performed and it was indicative of massive

pulmonary embolism. Anticoagulation therapy was performed and the patient's clinical status improved.

Thrombotic complications after implantation of pacemaker (PM) or AICDs regard essentially the veins involved in the introduction of the catheters [1]. Rarely thrombi in RA and/or pulmonary embolism secondary to permanent cardiac pacing are reported [2, 3].

This case shows that worsening of symptoms of cardiac failure, in patients with DCM and AICD, could sometimes be caused by pulmonary embolism due to an intracardiac device.

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Fig. 1 Transthoracic echocardiography: detail of the right atrium (RA) with thrombus (T) adherent to lead

Fig. 2 Transoesophageal echocardiography: detail of the right atrium (RA) with thrombus (T) adherent to lead. The mass is shown better than with transthoracic examination

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