Non-compaction cardiomyopathy with diffuse left coronary artery fistulae as a rare cause of congestive heart failure

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A 46-year-old woman was admitted to hospital due to dyspnoea. Chest X-ray, serological parameters, and spirometry ruled out pulmonary reasons or infection as its cause.

Transthoracic echocardiography revealed a moderately impaired left ventricular (LV) contractility (ejection fraction 42% calculated according to Simpson's rule); there were no relevant valvular pathologies. In the apex of the LV, prominent trabeculae were detected (Panel A); colour Doppler showed perfusion of the intertrabecular spaces from the LV cavity. This raised the suspicion of non-compaction cardiomyopathy (NCCM). Coronary angiography was performed, which ruled out coronary artery disease. Surprisingly, after injection of contrast agent (CA) into the left coronary artery (LCA), CA was rapidly detected within the LV, indicating diffuse fistulae from the LCA to the LV (Panel C: angiogram of the LCA, Panel D: beginning inflow of CA from the LCA into the LV, Panel E: opacification of the LV by the CA, Panel F: magnification of the marked area showing CA passed over from the LCA to the LV). For further diagnosis, magnetic resonance tomography was performed, which ruled out coronary artery disease (version 2012): the Joint Task Force on the Management of Valvular Heart Disease of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS). Eur Heart J 2012; in press.


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