

IMAGES IN CARDIOLOGY.....

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Left ventricular thrombi in a patient with left ventricular non-compaction in visualisation of the rationale for anticoagulation

A 46 year old previously fit and healthy male was admitted with a right femoral artery embolus, which was immediately removed by percutaneous thrombectomy. The ECG showed sinus tachycardia and incomplete right bundle branch block. Echocardiography identified left ventricular apical thrombi and left ventricular non-compaction (LVNC) as a rare cause for peripheral embolisation (below left). Cardiovascular magnetic resonance imaging showed severely reduced left and right ventricular global function with marked biventricular dilatation. Both left and right ventricle showed a thick non-compacted and a thin

compacted layer with a diagnostic left ventricular systolic non-compaction-to-compaction ratio of 3.6 (panel A). Thrombus imaging early after Gadolinium-DTPA administration revealed two apical left ventricular thrombi within the non-compacted layer of myocardium (panel B). Holter monitoring showed no serious arrhythmias. Coronary angiography revealed mild coronary plaque disease without flow limitation. The patient was discharged after therapeutic anticoagulation and will be regularly followed up. The patient was adopted and his two children who are both fit and well—they will be screened in due course.

LVNC is characterised by marked trabeculations exceeding a non-compaction to compaction ratio of 2. LVNC shows three typical complications: (1) progressive heart failure; (2) systolic embolisation; and (3) arrhythmias. To the best of our best knowledge, this is the first in vivo documentation of blood clots within the non-compacted layer in LVNC. The findings exemplify the rationale for the suggested low threshold for long term anticoagulation in LVNC.

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