Lipoma at the right atrioventricular groove

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The assessment of cardiac masses is currently based on ‘Multimodality imaging’ approach.

A 53-year-old man, with a clinical history of dilated cardiomyopathy, was admitted to San Raffaele Hospital in order to remove a previous infected implantable cardioverter defibrillator (ICD)-cardiac resynchronization therapy device with ultimate exposure of the generator. At admission, no clinical or laboratory signs of endocarditis were present.

A transoesophageal long-axis view showed a homogeneous echogenic mass protruding into the right atrioventricular groove and extending to the free wall without causing inflow obstruction (Panels A and B, white arrows). After the ICD device removal, the cardiac magnetic resonance morphological cine sequences confirmed the 20×30 mm encapsulated and hyperintense mass in the right atrioventricular groove (Panel C, black arrows); fat-saturated images revealed the presence of fat in the mass (Panel D, white arrows), confirming the diagnosis of cardiac lipoma.

Differential diagnosis may include cardiac malignancies and iatrogenic device-related haematomas.

The asymptomatic fatty lesion appeared as a well-encapsulated mass not infiltrating the surrounding tissue, devoid of a blood vessels network and not associated with clinical patterns of infiltrating cardiac tumour.

Systematic echocardiographic follow-up should be performed in order to monitor the extent of tumour growth and the involvement of the surrounding structures. At 1-year follow-up, the patient is still asymptomatic and the size of cardiac mass is unchanged.

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