Cardiac lipoma diagnosed by cardiac magnetic resonance imaging

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A 62-year-old man experienced a transient ischaemic attack. He underwent a transthoracic echocardiogram to rule out the presence of embolic source. It showed a 10 mm mass with broad attachment to the left side of the interventricular septum. Diagnosis of cardiac myxoma, sessile thrombus, and localized hypertrophic cardiomyopathy were considered. He was then referred for a cardiac magnetic resonance imaging (MRI) study for further characterization of the mass.

Cardiac MRI showed a solitary, well-defined, spherical mass arising from the endocardial surface of the mid-anterior septum. No other masses were present. On cardiac short-axis T1-weighted fast spin-echo MRI, the mass was hyperintense (Panel A). On T1-weighted fast spin-echo with fat suppression sequence, the mass-appeared hypointense (arrowhead) (Panel B). After administration of gadolinium-DTPA, first-pass perfusion imaging showed the mass was poorly perfused relative to normal myocardium (arrowhead) (Panel C). On late contrast-enhanced images, the mass did not uptake contrast (image not shown). On short-axis steady-state free precession cine MRI, the mass was slightly hyperintense showing a dark rim with the adjacent blood (Panel D). Regional wall motion was normal in all myocardial segments. All these MRI findings were compatible with a benign cardiac lipoma.

Primary tumours of the heart are rare. Approximately 75% of such tumours are benign and 25% are malignant. Most benign heart tumours are myxomas, and the majority of the rest are lipomas, papillary fibroelastomas, and rhabdomyomas. Cardiac lipomas account for 10% of all cardiac tumours. They are well-encapsulated tumours typically composed of mature fat cells. True cardiac lipomas are much less frequent than lipomatous hypertrophy of the interatrial septum, but they can occur in almost any location of the heart. Cardiac lipomas are generally incidental findings and in most cases require no treatment or surgical intervention. Cardiac lipomas can, however, cause arrhythmias, embolize, compress the coronary arteries, or obstruct flow within the heart. In these cases, surgical resection is recommended.

Our report highlights the importance of a comprehensive cardiac MRI approach that can provide the clinician with only an accurate description of the imaging findings but also the etiological diagnosis.

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CLINICAL VIGNETTE

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