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Pericardial hemangioma – Imaging with pathologic correlation of an extremely rare mediastinal lesion

Hemangioma pericárdico – Imagiologia com correlação anatomopatológica de uma lesão mediastínica extremamente rara

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A 56-year-old woman with a relevant past medical history of breast cancer was referred to our institution for magnetic resonance imaging (MRI) of a mediastinal mass detected incidentally during an oncological diagnostic work-up. A chest computer tomography had been performed at another institution.

MRI revealed a 5 cm well-circumscribed mass between the pulmonary trunk, the anterior wall of the left ventricle and the aortic root, not showing signs of invasion of the surrounding structures; it presented hyperintensity in T2-weighted sequences (Figure 1A and B) without diffusion restriction (Figure 1C and D), revealing globular and centripetal enhancement following intravenous administration of gadolinium-based contrast agent (Figure 1E–H). It was hypothesized that the mediastinal mass corresponded to a pericardial hemangioma.

Following the previously described diagnostic work-up, the patient was referred for surgical excision. The procedure was performed successfully and it was confirmed that the mass was arising from the pericardium and that it was not invading the surrounding structures.

The pathologic evaluation of the surgical specimen showcased several blood-filled cavernous spaces (Figure 1I), consistent with the diagnosis of hemangioma.

Cardiac hemangiomas are rare lesions consisting of benign vascular proliferations.[1,2] They can arise from any cardiac layer or, in extremely rare cases, from the pericardium.[1] Most patients are asymptomatic; symptoms depend on the location and size of the lesion.[3] Given its excellent contrast resolution and multiplanar capability, MRI is a valuable tool in the evaluation of cardiac masses and can sometimes suggest a specific diagnosis, as portrayed in this case. Treatment includes surgical excision, as this allows definitive diagnosis by enabling further pathologic evaluation and also prevents potential complications.[1]

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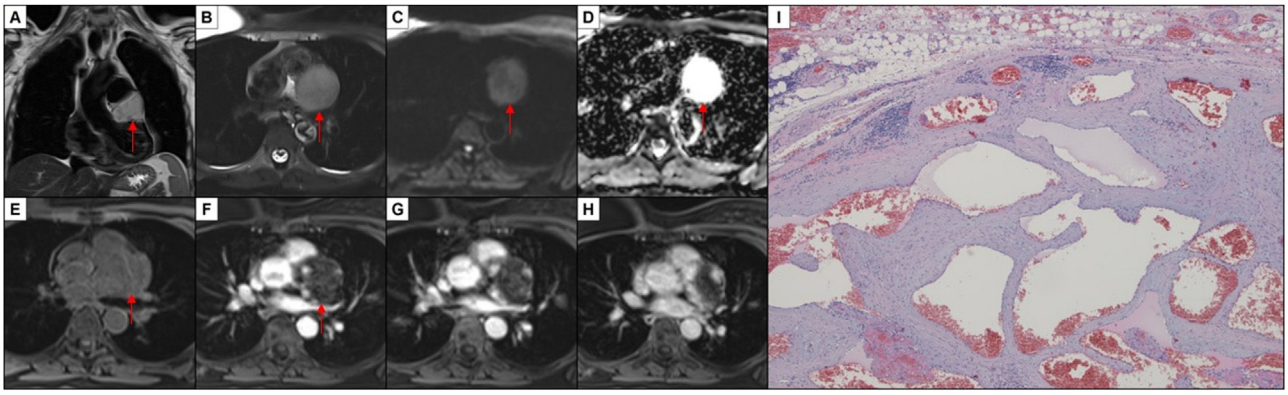

Figure 1 Pericardial hemangioma: MRI – (A) coronal T2-weighted imaging without fat saturation; (B) axial T2-weighted imaging with fat saturation; (C and D) diffusion-weighted imaging with ADC Map; (E–H) dynamic contrast-enhanced imaging – revealing a well-circumscribed mass (arrows) between the pulmonary trunk, the anterior wall of the left ventricle and the aortic root, with no signs of invasion of the surrounding structures; the mass is hyperintense in T2-weighted imaging (A and B), not showing diffusion restriction (C and D); after intravenous administration of gadolinium-based contrast media, the mass presents globular and centripetal enhancement (E–H). A diagnosis of pericardial hemangioma was proposed. Photomicrograph of hematoxylin-and-eosin-stained tissue of the surgical specimen (I) reveals several cavernous spaces filled with blood, corroborating the imaging diagnostic hypothesis of hemangioma.

Conflicts of interest

The authors have no conflicts of interest to declare.

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