Metastatic carcinoid tumour of the heart

Métastase cardiaque d’une tumeur carcinoïde

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A 68-year-old woman presenting with metastatic carcinoid tumours of the liver and pancreas was referred for CMR imaging because of LV location on somatostatin receptor scintigraphy imaging, a specific test for carcinoid neuroendocrine tumours (Fig. 1, Panel A). She did not have any clinical carcinoid symptoms and her urinary 5-hydroxyindole acetic acid concentration was raised.

Echocardiography showed: a 17 × 31 mm, well circumscribed, homogeneous, non-infiltrating tumour, located in the lateral LV wall (Fig. 1, Panel B); left-sided valvular involvement with moderate thickening and insufficiency of the mitral valve (Fig. 1, Panel B, arrow A); and an aneurysmal interatrial septum (Fig. 1, Panel B, arrow B; Video 1). Contrast echocardiography revealed substantial right-to-left shunting of microbubbles across the atrial septum at rest, consistent with a PFO. The rest of this test was normal without any right-sided valvular dysfunction.

CMR imaging showed a 20 × 20 × 29 mm, homogeneous, circumscribed mass developed in the lateral LV wall, extending into the pericardium without effusion (Videos 2 and 3). On black blood T1-weighted images, this mass had a slightly higher signal than the adjacent myocardium (Fig. 1, Panel C), without any decrease in signal intensity using a fat presaturation technique. After first-pass intravenous gadolinium, there was early tumour enhancement (Video 4). T1-weighted inversion recovery gradient echo images showed heterogeneous enhancement of this mass (Fig. 1, Panel D).

Somatostatin analogue treatment (lanreotide) was started. After 6-month follow-up, this patient was still free of clinical cardiac symptoms and the most recent CMR image did not show any progression of the mass.

Therapeutic options are pharmacological (with somatostatin analogue treatment to control vasoactive substance release), surgical (cases of severe valvular dysfunction) in
Figure 1. Panel A: Somatostatin receptor scintigraphy imaging. Panel B: Cardiac echocardiography, 4-chamber. Panel C: Black blood T1-weighted echo images before gadolinium injection. Panel D: T1-weighted inversion recovery gradient echo images.

and possibly interventional (with percutaneous closure of PFO to prevent worsening left heart involvement).

Conflict of interest statement

None.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.acvd.2009.11.008.