Right atrial Merkel cell tumour metastasis characterization using a multimodality approach

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An 80-year-old man with a history of left axillary Merkel cell carcinoma treated with chemoradiotherapy had an incidental finding of right atrial filling defect at mesenteric computed tomographic (CT) angiogram (Panel A). The multilobulated mass was confirmed on transthoracic (Panel B) and transoesophageal echocardiography (see Supplementary material online, Video S1). Cardiac magnetic resonance demonstrated adherence to the aortic root without infil- tration (Panels C and D; see Supplementary material online, Video S2). T1- (Panel E) and T2-signal intensity was non-specific. Only subtle first pass (Panel F) and late gadolinium uptake was seen (Panel G). Despite apparent low vascularity, fluorodeoxyglucose positron emission tomography CT confirmed hypermetabolic foci in the right atrium (Panel H). Percutaneous biopsy revealed typical histological features of Merkel cell carcinoma: small cells with scant cytoplasm, neuroendocrine chromatin, high mitotic rate (Panel I, left panel) and CK20-positive staining (right panel). The patient underwent targeted radiotherapy. This case highlights the usefulness of multimodality cardiac imaging in characterizing an intracardiac mass (LA, left atrium; LV, left ventricle; RA, right atrium; RV, right ventricle; Ao, aorta).

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