

IMAGE FOCUS

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Unusual mature teratomas in the right ventricle

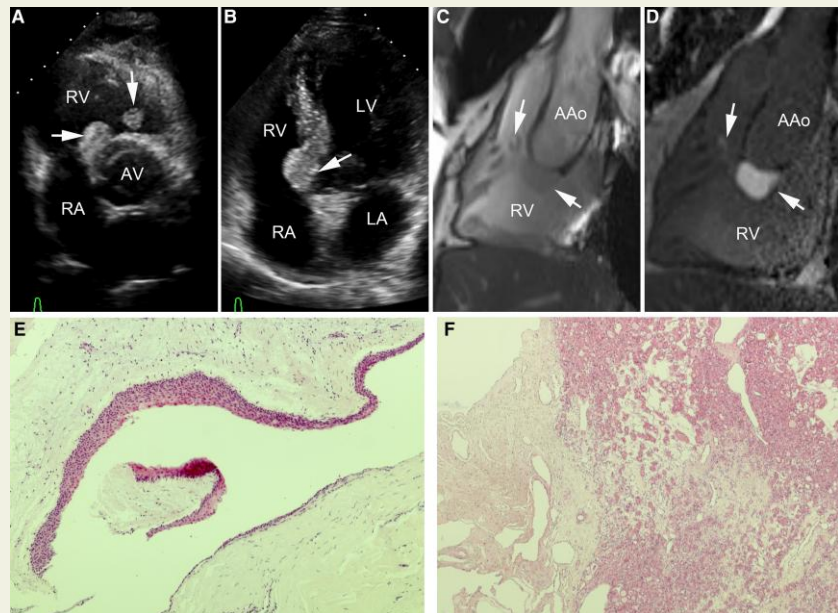
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A 65-year-old male with chest tightness for 50 years after exertion, presented with cardiac space-occupying lesions. Transthoracic echocardiography (TTE) showed two masses with the sizes of 25 × 15 mm and 8 × 9 mm in the right ventricle in the short axis view of the great vessels (Panels A, [Supplementary data online, Videos S1](#)). The larger one originated from the basal part of the ventricular septum in the four-chamber view (Panel B, [Supplementary data online, Video S2](#)) and the smaller one from septal side of the moderate band with a small pedicle. No obstruction was noted in the right ventricular outflow tract (RVOT). Cardiac magnetic resonance (CMR) oblique sagittal view (Panel C) showed two slightly high signal intensity lesions at the RVOT and higher interventricular septum (arrow). The two lesions showed higher signal intensity on the CMR late gadolinium enhancement (Panel D). Under general anaesthesia, median thoracotomy was performed and cardiopulmonary bypass was established. The masses were totally resected. Surgical findings were consistent with the TTE and CMR imaging. Temporary pacemaker was used because of third-degree atrio-ventricular block. Haematoxylin and eosin staining showed squamous epithelium with magnification of 10 × 5 (Panel E) and myocardial and thyroid tissues with a magnification of 10 × 10 (Panel F). Histopathological diagnosis was mature right ventricular teratoma. Most right heart tumours are malignant. Mature teratoma in the right ventricle is very rare with good prognosis after surgical procedure. TTE and CMR imaging are helpful for preoperative diagnosis.



(A) The short-axis view of the great vessels showed that two masses (arrow) located in the right ventricle (RV). (B) Four-chamber view showed that the larger mass (arrow) located in the base of the interventricular septum of the RV. (C) Cardiac magnetic resonance (CMR) oblique sagittal view showing two slightly high-signal intensity lesions at right ventricle outflow tract and higher interventricular septum (arrow). (D) The two lesions showing higher signal intensity on the CMR late gadolinium enhancement. (E) Haematoxylin and eosin (HE) staining showed stratified flat epithelium with magnification of 10×5. (F) Myocardial and thyroid tissues can be seen with HE staining with a magnification of 10×10. AAo, ascending aorta; AV, aortic valve; LA, left atrium; LV, left ventricle; RA, right atrium; RV, right ventricle.

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[Supplementary data](#) are available at *European Heart Journal – Cardiovascular Imaging* online.

Conflict of interest: None declared.