

## Image Challenge

### Intracardiac incidentaloma in a young woman

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#### Word count

245

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A young woman was found to have a large intracardiac mass on transthoracic echocardiography whilst being investigated for a persistent dry cough. She was otherwise symptom free. Subsequent full body computed tomography (CT) revealed no other significant abnormalities, and positron emission tomography (PET)-CT performed on the same day showed only mild fluorodeoxyglucose (FDG) uptake by the intramural mass.

A cardiac magnetic resonance (CMR) scan was obtained (figure 1) which confirmed a large, well circumscribed intramural septal cardiac mass. It demonstrated little enhancement on first pass perfusion imaging (supplementary videos).

Based on these CMR findings what is the most likely diagnosis?

- A. Lipoma
- B. Hypertrophic cardiomyopathy
- C. Fibroma
- D. Danon Disease

Answer: C

The combination of heterogeneous low signal on T2-weighted imaging, isointense signal on T1-weighted images (which persists despite fat suppression), poor enhancement on first pass perfusion imaging and diffuse late gadolinium enhancement (LGE) is characteristic of a cardiac fibroma (1). This was later confirmed on histology.

A lipoma demonstrates high signal on T1-weighted imaging which is suppressed by special fat saturation sequences (1). Hypertrophic cardiomyopathy is an important differential, but

normally has high signal on T2-weighted imaging (relating to oedema/inflammation) (2) and is not associated with such avid late gadolinium enhancement.

Danon disease is a rare X linked lysosomal storage disorder caused by mutations in the LAMP2 gene and which in females can present as an isolated cardiomyopathy (3). Although characterised by marked hypertrophy and extensive LGE, enhancement is typically patchy in nature and is often present at the right (RV) insertion points (4).

## References

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