Clinical picture

Not all myocardium that sparkles is amyloid

A 62-year-old gentleman was admitted following successful resuscitation from out-of-hospital cardiac arrest. Admission blood tests demonstrated a mild normocytic anaemia but no other abnormality. Transthoracic echocardiography revealed severe left ventricular hypertrophy with typical speckled appearance, moderate systolic dysfunction and global pericardial effusion (Figure 1A). Coronary angiography did not show any obstructive stenoses. Pericardial fluid cytology and computed tomography of the thorax, abdomen and pelvis were normal. For further tissue characterization of the myocardium, contrast-enhanced cardiac magnetic resonance imaging was performed which demonstrated diffuse late gadolinium enhancement (Figure 1B) indicating a diffuse infiltrative

Figure 1. Transthoracic echocardiography (A) and magnetic resonance imaging (B) of the heart. Gross appearance of a short axis slice through the fresh heart at mid-ventricular level (C) and high power photomicrograph showing the abnormal histology (D).
cardiomyopathic process. Cardiac amyloid was suspected but rectal biopsy and right ventricular endomyocardial biopsy were negative. Whilst being assessed for potential heart transplantation, the patient died and post-mortem demonstrated circumferential transmural replacement and expansion, predominantly of the left ventricle, by fleshy tumour tissue (Figure 1C). Figure 1D is a high-power photomicrograph demonstrating avid cytoplasmic staining of abnormal lymphocytes for the pan B-cell marker CD20 (CD20 immunoperoxidase stain, original magnification ×40). The final diagnosis was malignant myocardial infiltration with high-grade B-cell non-Hodgkin’s lymphoma.

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Conflict of interest: None declared.