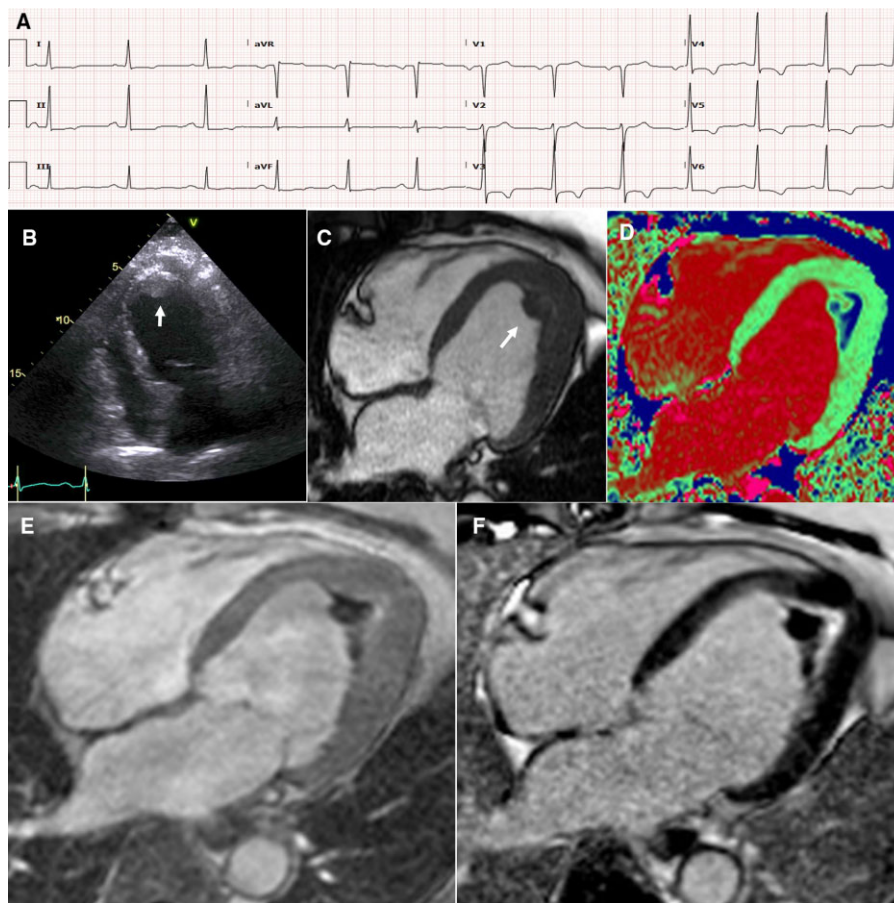


Bullous pemphigoid- and thymoma-associated endomyocardial fibrosis

Gani Nuredini ¹, Souhad Yousef ², C Anwar C. Chahal ², and Mohammed Y. Khanji ^{1,2,3*}

¹Department of Cardiology, Newham University Hospital, Barts Health NHS Trust, Glen Road, Plaistow, London E13 8SL, UK; ²Department of Cardiology, Barts Heart Centre, St Bartholomew's Hospital, Barts Health NHS Trust, London EC1A 7BE, UK; and ³NIHR Barts Biomedical Research Centre, William Harvey Research Institute, Queen Mary University of London, Charterhouse Square, London EC1M 6BQ, UK

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* Corresponding author. Tel: +44 20 7363 807, Email: m.khanji@qmul.ac.uk

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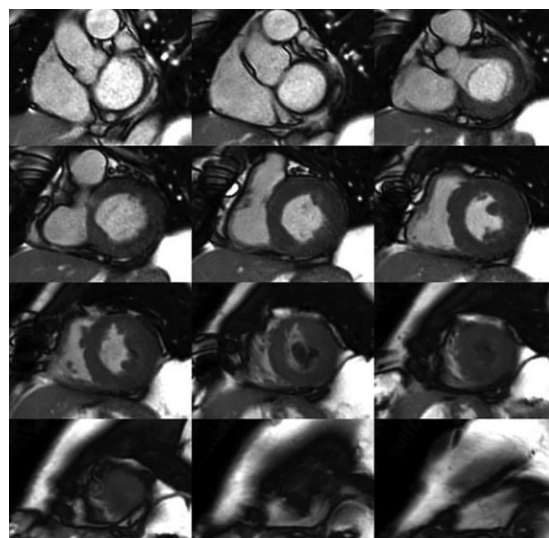
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A 59-year-old male of Chinese descent was found to have an abnormal electrocardiogram during routine hypertension assessment. Blood pressure had been poorly controlled due to issues with medication compliance. He had bullous pemphigoid (9 years); receiving steroid therapy for 5 years and underwent thymectomy 13 years prior. There was no history of atopy.

Electrocardiography showed anterolateral T-wave inversion with ST-segment depression (*Panel A*). Echocardiogram revealed thickened left ventricular (LV) apex, with suspicion of apical thrombus (22 mm × 1.7 mm), despite reasonable contraction (*Panel B, Video 1*). Overall LV function appeared mildly impairment (ejection fraction 46%). Severe acute respiratory syndrome coronavirus 2 polymerase chain reaction swab and autoantibodies including anticardiolipin antibody were negative. The peripheral eosinophils had been elevated upto 2 years prior ($1.3 \times 10^9/L$, normal $<0.5 \times 10^9/L$), although normal at admission. Cardiovascular magnetic resonance imaging confirmed LV apical cavity amputation with suspicion of thrombus on steady-state free precession cine and T1 map (arrow *Panels C and D*). Large thrombus was confirmed on early gadolinium imaging (*Panel E*) with apical LV late gadolinium enhancement (*Panel F*). Endomyocardial fibrosis (EMF) was diagnosed, with no right ventricular or mitral subvalvular apparatus involvement. The patient was discharged on warfarin.

Bullous pemphigoid is an autoimmune-mediated blistering disease of the skin and thymomas are rare, usually benign tumours of the thymus. Interleukin-5 provoked hypereosinophilia is present in about half of patients with bullous pemphigoid. T-cell-induced hypereosinophilia can also occur in a small number of patients with thymoma. Although hypereosinophilia can lead to EMF, eosinophil count may be normal at the time of diagnosis. Cardiovascular magnetic resonance complements echocardiography by providing excellent myocardial tissue characterization



Video 1 Short-axis SSFP cine of the left and right ventricles showing left apical cavity amputation and thrombus.

for diagnosis along with facilitating treatment and disease monitoring.

Consent: The authors confirm that written consent for submission and publication of this case report including images and associated text has been obtained from the patient in line with COPE guidance.

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