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LEARNING POINTS

- Posterior reversible encephalopathy syndrome can occur as a consequence of arterial hypertension, pregnancy, immunosuppressant therapy, renal failure or systemic inflammatory disease.
- It is a serious condition which commonly presents with neurological symptoms such as visual disturbance, headache and seizures.
- If suspected early magnetic resonance imaging should be obtained to assess for any perfusion defect on diffusion weighted imaging sequences to exclude an acute stroke.
- The condition is confirmed on brain imaging, with hyperintense signal on FLAIR (fluid-attenuated inversion recovery) sequences, most typically in the posterior cerebrum.
- Prompt treatment of the underlying cause should be instated to prevent irreversible cerebral infarction, which has been reported in some cases.

Cardiac MRI of simultaneous left ventricle and left atrial appendage thrombi in a patient in sinus rhythm

A 75-year-old man was found to have triple vessel disease on coronary angiography, following an initial presentation with shortness of breath. Electrocardiogram showed sinus rhythm with anterior Q waves. Transthoracic echocardiogram revealed an ejection fraction of 25%. A cardiac stress magnetic resonance imaging (MRI) showed a transmural antero-septal and anterior infarct associated with thrombus in the anterior wall and left atrial appendage (*Figure 1*). There was viable myocardium in the other territories. He was commenced on anticoagulation and referred for a coronary artery bypass graft.

Left atrial appendage thrombus is an uncommon finding in the presence of sinus rhythm. It is usually associated with significant left ventricular dysfunction (as in this patient), left-sided valvular disease or a previous history of atrial fibrillation (Agmon et al, 2002). Thrombus formation is associated with poor contraction and dilation of left atrial appendage. This demonstrates the utility of cardiac MRI in detecting unsuspected thrombi in a patient in sinus rhythm, not detected with transthoracic echocardiogram, which changed clinical management. BJHM

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Figure 1. Cardiac magnetic resonance images showing thrombi in the left atrial appendage (white large arrow) and the anterior wall (black large arrow) of the left ventricle, and infarct in the anterior wall (small white arrows). a. Steady-state free precession cine image still post-contrast at end diastole (two-chamber view). b. Late gadolinium enhancement two-chamber view. c. Steady-state free precession cine image still post-contrast at end diastole (short-axis view). d. Late gadolinium enhancement short-axis view.