Isolated posteromedial papillary muscle endocarditis

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A 69-year-old male presented with a 3-week history of fatigue. Physical examination revealed an Osler’s node on the right index finger (see Supplementary data online, Figure S1), a Janeway lesion in the right palm (see Supplementary data online, Figure S2), and a splinter haemorrhage in the right middle finger. Laboratory data showed leucocytosis and methicillin-resistant Staphylococcus aureus grew on blood cultures. A transthoracic echocardiogram (TTE) was normal. A brain magnetic resonance imaging (done due to intermittent confusion) revealed ring-enhancing lesions consistent with septic emboli. Abdominal computed tomographic scan performed due to abdominal pain showed a splenic infarction (see Supplementary data online, Figure S3). Due to high suspicion for infective endocarditis (IE), a transoesophageal echocardiogram (TEE) was performed which showed a 1.0 × 0.6 cm mobile mass attached to the posteromedial papillary muscle (Figure 1; see Supplementary data online, Video S1) with no mitral regurgitation. All valves were visualized with no vegetations. Treatment with vancomycin and rifampicin resulted in rapid clinical improvement. Repeat TEE was not performed considering the complete resolution of symptoms.

Papillary muscles are rarely involved in IE. All six previously reported cases were associated with papillary muscle rupture and mitral regurgitation. This patient had isolated posteromedial papillary muscle involvement with no evidence of rupture or valvular infection. Although it is possible that any of the emboli originated from the mitral valve, it is unlikely given normal valve morphology and the absence of mitral regurgitation.

Papillary muscle infection should be suspected when suspicion for endocarditis is present and no valvular abnormality is detected. Papillary muscle vegetations may be associated with high risk of systemic embolization. Transoesophageal echocardiogram is better than TTE in detecting papillary muscle endocarditis.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

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