A case of non-infective endocarditis accompanied by multiple cerebral infarctions and severe mitral regurgitation as initial presentation of primary antiphospholipid syndrome

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A 56-year-old male was referred to our hospital due to an acute onset of dysarthria and bilateral leg weakness. Magnetic resonance imaging revealed scattered cerebral infarctions, indicating multiple cardiogenic strokes (Panels A–C). Transesophageal echocardiography revealed the granular masses attached to the edges of both anterior and posterior mitral leaflets (Panel D and see Supplementary data online, Movie S1), and these vegetations interfered with the coaptation of the mitral leaflets, which caused severe mitral regurgitation (Panel E and see Supplementary data online, Movie S2). He did not have any signs of infection throughout the clinical course, and any organisms were not detected from the repeated blood cultures. Immune serum examination confirmed the presence of both antiphospholipid antibody and lupus anticoagulant, he was then diagnosed with non-infective endocarditis secondary to antiphospholipid syndrome (APS), known as Libman-Sacks endocarditis, and these mobile vegetations were suspected to be possible sources of multiple cerebral infarctions. Intraoperative inspection confirmed the red granular brittle lesions on the entire edges of both mitral leaflets (Panel G) as shown by the preoperative three-dimensional transesophageal echocardiography (Panel F and see Supplementary data online, Movie S3). Surgical repair, with simple resection of vegetations and mitral annuloplasty, was successfully performed.

Although the mechanism of Libman-Sacks endocarditis is still unclear, some immunological response may triggers the fibrin-platelet reaction on the surface of valve endocardium, and forms vegetations, which causes fibrotic, oedematous, thickened, and inflammatory change of valve leaflets. This is a rare case of primary APS concomitant with both multiple cerebral infarctions and severe mitral regurgitation requiring valve surgery as initial presentation.

Conflict of interest: none declared.

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

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