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Postinfarction dissecting intramyocardial haematoma in a patient treated with immunosuppressant

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DESCRIPTION

A 58-year-old Japanese man who had been taking immunosuppressant tacrolimus (2 mg/day) for rheumatoid arthritis over 3 years was admitted with deterioration of exertion. He had complained of chest discomfort a month earlier. ECG exhibited a QS pattern and ST elevation in the anterior precordial leads. Transthoracic echocardiogram revealed an impaired left ventricle (LV) function with akinesis of the antero-septal wall. A low echoic cavity was observed at the apex of LV (figure 1A, video 1), and colour Doppler imaging demonstrated the turbulent pulsatile flow in the cavity (figure 1B, video 2). Moreover, three-dimensional (3D) echocardiogram showed dynamic movement of the dissecting myocardium in the LV chamber (figure 1C, video 3).

Coronary angiography performed on the admission day confirmed total occlusion of the left anterior descending artery. This was identified as a dissecting intramyocardial

haematoma (DIH) due to acute myocardial infarction (AMI). Because the patient rejected surgical treatment, we decided to observe him conservatively. We prescribed an ACE inhibitor (enalapril 2.5 mg/day) and β -blocker (carvedilol 5 mg/day). Anticoagulation therapy would also progress dissection,¹ and we did not use antiplatelet or anticoagulation agents for this patient. The neo-cavity was progressively clotting (6 days, figure 2A; 12 days, figure 2B), thrombosed (6 months, figure 2C) and regressed 14 months later (figure 2D).

DIH is a rare form of cardiac rupture that can occur as a complication following AMI. The impaired remodelling in a subacute phase is suggested to be the pathogenesis of DIH. We discuss that tacrolimus might contribute to a delay in a healing process, promoting intramyocardial haemorrhage, as the compound is reported to attenuate the accumulation of mononuclear cells, preventing scar formation.² Contrast echocardiography, Doppler colour

Figure 1 Transthoracic four-chamber imaging (A), Doppler colour flow imaging (B) and three-dimensional echocardiogram (C) on the admission day. Asterisk indicates the neo-cavity of dissecting intramyocardial haematoma. LV, left ventricle; RV, right ventricle.

Figure 2 Spontaneous regression of dissection intramural haematoma at 6 days (A), 12 days (B), 6 months (C) and 14 months (D) after admission.

Video 1 Transthoracic four-chamber imaging taken on the admission day.

Video 3 3D echocardiogram taken on the admission day.

Video 2 Doppler colour flow imaging taken on the admission day.

recording and 3D echocardiogram would improve the accuracy of diagnosis by recognising communication between the chamber of the ventricle and the dissected myocardium, flow within the dissecting myocardium and structural integrity of DIH. This case showed a benign prognosis under the conservative observation; however, some cases extending from the apex into the septum or right ventricle require surgical treatment.³

Competing interests None.

Patient consent Obtained.

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