Successful treatment of ball-shaped very late thrombus after myocardial infarction

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Accepted 16 April 2014

DESCRIPTION

A 40-year-old man presented with chest pain. Eight years ago he had suffered from acute anteroseptal ST-elevation myocardial infarction (MI) and 3 years ago he stopped taking medicines including antiplatelet drugs and warfarin by himself. ECG showed no ST-elevation this time; however, elevation of troponin T was detected, which diagnosed a second attack of MI. Emergent coronary angiography showed total occlusion of previously deployed stent in the left ascending coronary artery. His conventional coronary risk factors were smoking and dyslipidaemia. Transthoracic echocardiography revealed a huge pedunculated, oscillating mass at the left ventricular (LV) apex (figure 1A, video 1), which had not been detected during the first admission. The echotexture is heterogeneous with pulsatile partial change of morphology. The size of the mass was 42×26 mm. Cardiac MRI also documented a mass at the apex (figure 1B). Three weeks after initiation of the recommended anticoagulant therapy including unfractionated heparin and warfarin,¹ echocardiography showed the completely vanishing mass and none of apical aneurysmal changes (figure 1C, video 2). Differential diagnosis of ball-shaped mass in the LV may be thrombi, tumours or vegetations. Disappearance by anticoagulation therapy gave definitive diagnosis of thrombus. The incidence of LV thrombus was about 4% in patients with segment elevation MI (STEMI) treated with percutaneous intervention.² Most of LV thrombi are mural thrombi

Video 1 Transthoracic echocardiography revealed huge pedunculated oscillating mass at the left ventricular apex.

Video 2 Echocardiography after the initiation of anticoagulant therapy showed the completely vanished mass and none of apical aneurysmal change.

Figure 1 (A) Transthoracic echocardiography revealed a huge pedunculated oscillating mass at the left ventricular apex. (B) Cardiac MRI documented movable mass at the apex. (C) Echocardiography after the initiation of anticoagulant therapy showed the completely vanished mass and none of the apical aneurysmal change.

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To cite: Inami T, Tsurumi M, Seino Y, *et al.* *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2014-204340

significantly increasing the risk of embolisation. LV thrombi after an acute anterior MI were present in 96% at 2 weeks.³ Few thrombi developed several years after MI. This is a very rare case that the ball-shaped pedunculated thrombus developed very late in the LV apex 8 years after MI. Practical physicians should consider the possible existence of very late LV thrombus in patients with antero-septal MI, and periodic echocardiography should be performed during long-term follow-up period.

Learning points

- ▶ Ball-shaped very late thrombus could develop in the left ventricular (LV) apex several years after myocardial infarction (MI).
- ▶ Periodic echocardiography in patients with antero-septal MI should be performed during long-term follow-up period.
- ▶ Ball-shaped very late thrombus in left ventricular apex could disappear with the anticoagulant therapy.

Contributors IT, SY and SW contributed equally to the preparation and writing of the manuscript. TM contributed to treating patient in the intensive care unit.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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