

Active left atrial thrombus leads to myocardial and cerebral infarction:a case report

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Abstract

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Active left atrial thrombus leads to myocardial and cerebral infarction:a case report

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Abstract

We herein report a woman in her 70s was admitted to hospital with myocardial and multiple lacunar cerebral infarction, transthoracic echocardiogram revealed an active thrombus in the left atrium like a ping-pong ball. Anticoagulation was administered with low molecular weight heparin but did not work, the patient later developed cerebral infarction in the right frontotemporal lobe. There is a greater risk of severe cerebral infarction in active left atrial thrombus without mitral stenosis. Echocardiography played an important role in definitive diagnosis.

Case report

A 74-year-old woman with a history of atrial fibrillation and hypertension presented to our emergency department for persistent chest tightness. One month ago coronary computed tomography angiography showed mild coronary stenosis (Panels A). Electrocardiogram showed atrial fibrillation, ST-T segment changes, and abnormal Q waves in leads III and aVF(Panels B). Computed tomography showed multiple lacunar cerebral infarction, heart enlargement and pericardial effusion(Panels C,D). Transthoracic echocardiography showed an oval mass, 38*30mm in size, moving fast in the left atrium like a ping-pong ball (Panels E、F and G; Supplementary material online, Movie S1). Doppler echocardiography showed that the mass blocked the mitral valve orifice during diastole. No colour Doppler signal was detected in the mass (Panel H). Due to the history of atrial fibrillation, this mass was diagnosed as a thrombus and anticoagulation was administered with low molecular weight heparin^{1,2}. After 7 days, echocardiography reexamination showed that the mass was still moving fast in the left atrium as before. Due to the poor tolerance of the patient and the patient's refusal for surgical treatment, the patient was discharged with anticoagulant therapy and followed up. Two

months later, the patient was readmitted with limb weakness and slurred speech, computed tomography showed cerebral infarction in the right frontotemporal lobe(Fig. 1F), echocardiography showed that the mass in the left atrium had disappeared. Medication was ineffective and the patient died three months later.

Discussion

We report a case involving a woman with myocardial and cerebral infarction due to active left atrial thrombus, which was more dangerous than previously reports^{3,4}. The thrombus was associated with atrial fibrillation, but not mitral stenosis, and was at greater risk of severe cerebral infarction^{1,2}.

Declaration of Competing Interest

The authors state that they have no conflicts of interest (COIs).

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