Transient left ventricular outflow tract obstruction in a patient with ruptured dissecting aortic aneurysm

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A 86 year-old woman was admitted to our hospital because of chest pain. An emergent computed tomography revealed ruptured dissecting aortic aneurysm of the descending aorta (Panel A). On admission, she was hypotensive (blood pressure 74/40 mmHg) and jugular venous dilatation and pretibial edema were noted. Echocardiography (Panels B, C and see Supplementary data online, Movie S1) showed that the left atrium was compressed by the mediastinal haematoma and systolic anterior motion (SAM) of the anterior mitral leaflet was observed (Panels C and D; arrow). Colour and continuous wave Doppler echocardiography revealed left ventricular outflow tract (LVOT) stenosis with a maximal pressure gradient of 128 mmHg (Panels E and F). Because of high operative risk, she was conservatively managed using a beta-blocker. The size of haematoma gradually decreased and SAM/LVOT stenosis disappeared and she was discharged 3 months after admission. In this case, a combination of acute blood loss, decreased left atrial and ventricular chamber size due to compression, and increased sympathetic activity was considered as possible cause of SAM and LVOT stenosis.

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

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