Aortic pseudoaneurysm with fistulization to the left ventricle

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A 66-year-old woman suffering from acute decompensated heart failure was admitted into our hospital. She had undergone aortic root and valve replacement with the Bentall-de Bono continuous-suture wrap-inclusion technique because of acute type A aortic dissection 14 years before. Physical examination showed signs of congestive heart failure, a bounding pulse and a grade 5/6 early diastolic blowing murmur over the aortic area. Blood pressure was 140/50 mmHg in both upper limbs. Trans-thoracic echocardiography revealed a pseudoaneurysm (Ps) surrounding the aortic graft (AG) with an important diastolic flow from the ascending aorta into the left ventricle (LV) (Panel A, Supplementary data online, Video S1), and holodiastolic flow reversal in the descending aorta (Panel B). Transoesophageal echocardiography demonstrated massive flow from the aortic pseudoaneurysm to the LV (Panel C, Supplementary data online, Video S2) and free flow between the AG and the pseudoaneurysm (Panel D, Supplementary data online, Video S3). Multidetector computed tomography (Panels E and F) confirmed a pseudoaneurysm of the ascending aorta with a defect on the left aspect of the graft (asterisk), and fistulization to the LV (white arrow). The right coronary ostium was in good condition, reaching the graft, whereas the left coronary ostium was totally detached and originated from the pseudoaneurysm itself. Successful regrafting and coronary ostium reconstruction was performed. Despite postoperative care, the patient died of a multiple organ failure syndrome shortly after intervention.

Pseudoaneurysm formation after aortic root surgery is a life-threatening sequela that must be kept in mind after surgery of the ascending aorta with the use of the continuous-suture wrap-inclusion technique. We report an exceptional case of pseudoaneurysm with the unusual finding of fistulization to the LV, which has not, to our knowledge, been previously reported in the literature.

Conflict of interest: none declared.

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

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