Left ventricular pseudoaneurysm expansion without surgical treatment

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An 82-year-old man was admitted with acute inferior wall myocardial infarction and underwent successful percutaneous coronary intervention for the right coronary artery. Pre-discharge transthoracic echocardiogram revealed a dyskinetic cavity connected to the posterior left ventricular wall (Panel A). Cardiac magnetic resonance confirmed the presence of a pseudoaneurysm with a maximum internal end-systolic dimension of $1.5 \times 2 \times 1$ cm (Panel B). Surgery was strongly recommended to the patient and his family but they declined.

One year later the patient was readmitted to the hospital with progressively worsening exertional dyspnoea. Chest X-ray revealed a rounded opacity silhouetting the left cardiac border (Panel C). Echocardiogram showed a great increase in the size of the pseudoaneurysm to $\sim 7 \times 6 \times 5$ cm, which was communicating with the left ventricle through a 3-cm defect in the posterior left ventricular wall (Panels D and E, Supplementary data online, Video S1). The pseudoaneurysm was contained by a thin layer of visceral pericardium surrounded by thrombotic material in the pericardial space.

Systolic expansion of the pseudoaneurysm was noticed (Supplementary data online, Video S2). Colour Doppler imaging showed bidirectional flow between the left ventricle and the pseudoaneurysm (Panel F). We recommended repeating magnetic resonance and reconsidering surgery but the patient refused. The patient was discharged when dyspnoea had improved after a few days of medical therapy.

Left ventricular pseudoaneurysm is an uncommon complication after transmural myocardial infarction. Surgical resection is considered the treatment of choice because of the risk of rupture. This report shows how a small pseudoaneurysm progressed to a huge pseudoaneurysm over a 1-year period without surgical treatment.

LA, left atrium; LV, left ventricle; PS, pseudoaneurysm.

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

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