Late left atrioventricular disruption: an unusual complication of mitral valve replacement after endocarditis

Inês Silveira, Raquel Baggen Santos, Patricia Rodrigues, Sofia Cabral, Severo Torres
Centro Hospitalar do Porto, Porto, Portugal

Late development of left ventricular (LV) rupture after mitral valve (MV) replacement is a rare clinical condition associated with a poor prognosis. The diagnosis of this complication may be difficult, and a multimodality imaging approach is extremely useful for its characterisation. We report a case of a 35-year-old man who presented with heart failure due to an acute native MV endocarditis. Echocardiography showed a ruptured anterior MV leaflet with severe mitral regurgitation, and a periannular abscess in anatomical relation with left atrial appendage. Antibiotic therapy was started and an urgent surgery was performed, in which the MV was replaced with a mechanical prosthetic valve. After an uneventful year, the patient was admitted again with an acute pericarditis. Echocardiography evaluation (transsthoracic and transoesophageal) revealed a large cavity (39 × 33 mm) with systolic expansion in the basal segment of anterolateral LV wall, immediately below the prosthetic mitral annulus plane, communicating with the LV through a neck of 13 mm (Fig. 1A–C, asterisk), suggesting the presence of a late left atrioventricular groove disruption. In addition, two paraprosthetic leaks were visualised, leading to at least moderate regurgitation (Fig. 1D). During follow-up, LV ejection fraction decreased slightly to 58% and mild LV dilatation developed. An additional anatomical characterisation with cardiac computed tomography (CT) was performed, confirming left atrioventricular groove rupture adjacent to the prosthetic MV (Fig. 1E–G, asterisk), leading to a slightly antero-superior displacement of the left coronary artery, and in close relationship with the circumflex artery (pointed out with an arrow in Fig. 1G). This CT anatomical characterisation of the surrounding structures was essential in surgical treatment planning. The patient was successfully submitted to LV repair and prosthetic MV replacement with improvement in clinical status.

Address for correspondence:
Dr. Inês Silveira, Centro Hospitalar do Porto, Largo Prof. Abel Salazar, 4099-001 Porto, Portugal, e-mail: ines.c.silveira@gmail.com

Conflict of interest: none declared
Kardiologia Polska Copyright © Polish Cardiac Society 2018