Mitral valve repair in acute extensive infectious endocarditis

Réparation de la valve mitrale dans l’endocardite infectieuse aiguë étendue

Hajo Müller, Jorge Sierra, René Lerch

Cardiology service, Division of Cardiology, University Hospital of Geneva, 24, rue Micheli-du-Crest, 1211 Geneva 14, Switzerland
Cardiovascular surgery service, University Hospital of Geneva, Geneva, Switzerland

Received 15 April 2009; received in revised form 5 May 2009; accepted 5 May 2009
Available online 5 September 2009

A 25-year old woman with a history of a cardiac murmur in childhood presented with acute occlusion of the left popliteal artery requiring emergency surgical embolec-
tomy. Transoesophageal echocardiography (TEE) showed several mobile masses up to 16 mm in size on both mitral valve leaflets, in the region of the anterolateral part of the valve, compatible with vegetations (Fig. 1, Panel A, white arrows). There was a prolapse of the posterior and anterior mitral valve leaflets near the antero-
lateral commissure with likely perforation of the two leaflets in this region leading to severe mitral regurgitation (Fig. 1, Panel B). Imaging with the real-time transoesophageal three-dimensional echocardiography (3DE) showed more clearly that mitral valve prolapse was located to the paracommissural parts of both leaflets (A1 and P1), with large vegetations attached close to the commissure (Fig. 1, Panel C, white and black arrows, respectively). Urgent surgery, performed to avoid further embolization and leaflet destruction, confirmed the echocardiographic findings. An enormous vegeta-
tion (Fig. 1, Panel D, arrow) was located at the level of the anterolateral commissure extending to A1 and P1 with nearly complete destruction of the underlying valve tissue. Successful mitral valve repair was performed with reconstruction of the anterolateral commissure and the adjacent anterior leaflet segment with a bovine pericardial patch. Cultures from blood, thrombus and the vegetation revealed the presence of *Streptococcus mitis*. 

KEYWORDS
Infectious endocarditis; Mitral valve repair; Transoesophageal echocardiography; Three-dimensional echocardiography

MOTS CLÉS
Endocardite infectieuse ; Réparation valvulaire mitrale ; Échocardiographie transoesphagienne ; Échocardiographie tridimensionnelle

* Corresponding author. Fax: +41 22 3727229.
E-mail address: hajo.muller@hcuge.ch (H. Müller).
Mitral valve repair, if feasible, is the procedure of choice for mitral regurgitation, especially in the case of acute infective endocarditis. However, in the case of extensive destruction, especially if the anterior leaflet and/or the commissures are involved, repair may be technically challenging with a suboptimal result. We report here the case of successful repair in such a difficult situation. Precise delineation of the endocarditic lesion is critical to achieve a successful repair. In our case, real-time transoesophageal 3DE had a complementary diagnostic value.

**Conflicts of interest**

None.