

Cardioband to treat functional mitral regurgitation: a word of caution

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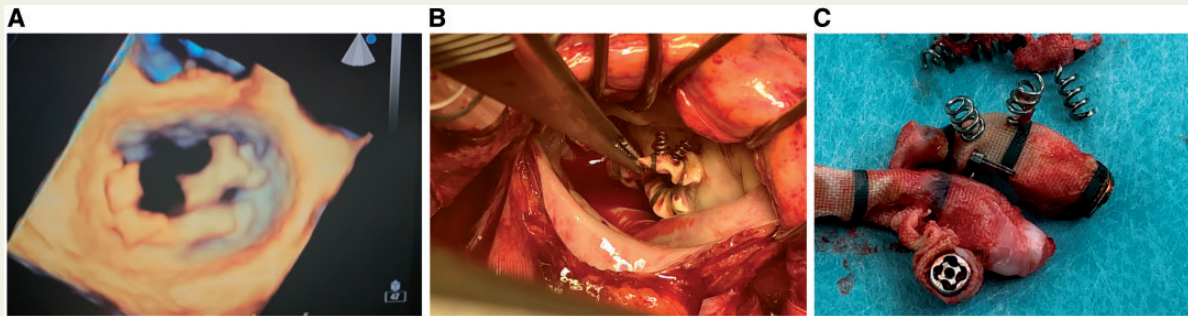
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A 69-year-old patient underwent coronary artery bypass grafting (CABG) and developed chronic pericardial effusion requiring steroids and colchicine. Two months later, he was re-admitted with severe functional mitral regurgitation (MR). Symptomatic atrial flutter was treated with cavo-tricuspid isthmus ablation. Angiography demonstrated patency of coronary anastomoses.

Six months post-CABG, he underwent Cardioband implantation, even though the case was not found ideal for this procedure (calcification of the annulus and tethering of both leaflets). Post-interventional transthoracic echocardiography showed a residual moderate to severe MR. Patient's physical performance remained far behind expectations. A Mitra-Clip was proposed since redo-surgery was estimated a high-risk procedure.

The patient asked for second opinion. Mitral surgery was recommended and performed 1 year following CABG. Intraoperative transoesophageal echocardiography (TOE) showed a partially detached Cardioband (*Panel A*). At surgery, the Cardioband was found attached into the posterior leaflet and not into the annulus. More than 50% of the band was detached with two anchors floating free in the left atrium (*Panel B*). The Cardioband was resected with care to unscrew the fixation but following explantation (*Panel C*), the leaflets were destroyed to a degree not amenable to repair. The valve was replaced with uneventful post-operative course.



The Cardioband is considered as 'first percutaneous annuloplasty device to achieve surgical standards with durable reduction of MR'. The present case—apart from high costs (more than 80 000 Euros) and delay in the definitive treatment of severe MR—may caution for more reservation when Cardioband is described as opening up the perspective for 'surgical standard' for transcatheter repair beyond palliation. (*Panel A*) 3D intraoperative TOE showing a partially detached Cardioband with at least two anchors that could be identified as floating in the left atrium. (*Panel B*) Intraoperative situs confirmed echocardiographic findings. Great care was addressed to not disconnect the anchors from the band. (*Panel C*) The contraction spool (bottom in the panel) and several screws were not stably anchored; this was probably the reason for insufficient annuloraphy.

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