

Image in cardiology

Iatrogenic Anterior Papillary Muscle Rupture

Rotura iatrogénica de músculo papilar anterior

Emiliano Rodríguez-Caulo,^{a,*} Eduardo Quintana,^b and Manel Castellá^b

^aServicio de Cirugía Cardiovascular, Hospital Universitario Virgen Macarena, Seville, Spain

^bServicio de Cirugía Cardiovascular, Institut del Tòrax, Hospital Clínic i Provincial, Universidad de Barcelona, Barcelona, Spain

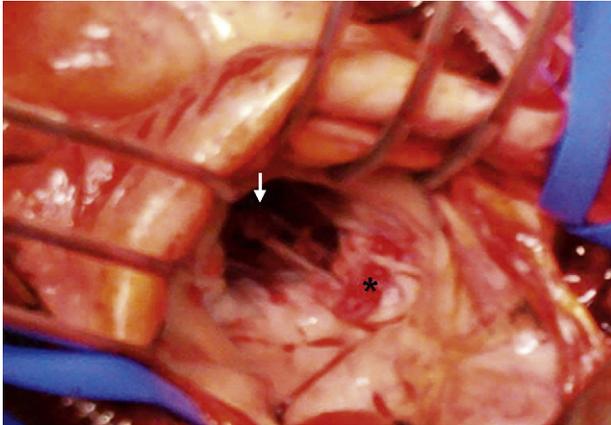


Figure 1.

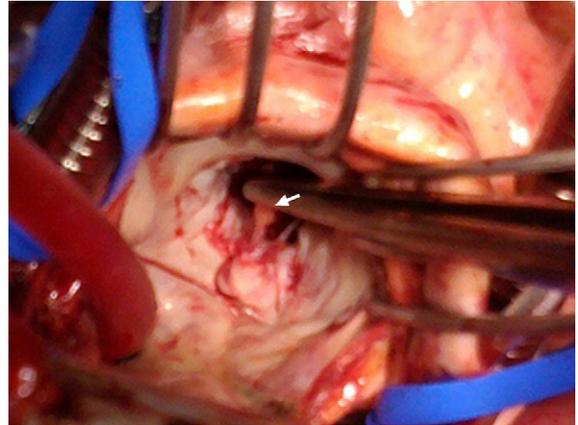


Figure 2.

Iatrogenic injury to the mitral valve or subvalvular apparatus is an uncommon, but severe complication. We present the case of a 40-year-old man with permanent atrial fibrillation accepted for circumferential ablation of the four pulmonary veins with the CARTO system.

During the procedure, the Lasso deflectable catheter (Lasso Nav[®], Biosense Webster) was trapped in the mitral subvalvular apparatus. Several maneuvers performed to free the device were ultimately successful, and the procedure was terminated satisfactorily. Nonetheless, the control echocardiography showed severe mitral regurgitation of the posterior leaflet, secondary to rupture of the anterior papillary muscle, warranting urgent surgery.

A medial sternotomy and left atriotomy were carried out, and the mitral valve was repaired by annuloplasty and implantation of four polytetrafluoroethylene neochords in the posterior leaflet, with a good final outcome. In Figures 1 and 2, the intense abrasion (*) and damage resulting from the maneuvers to free the device are evident, as well as the sectioned papillary muscle (arrows).

In a recent registry of 8745 patients undergoing ablation for atrial fibrillation, only 1 case of valve injury (without specifying the type) was recorded (Cappato et al., 2005). In a retrospective review of 348 patients, however, a significantly higher incidence (0.9%) was reported (Kesek et al., 2007). Most of these patients require a surgical intervention to extract the device or repair the mitral valve.

* Corresponding author:

E-mail address: erodriguezcaulo@hotmail.com (E. Rodríguez-Caulo).

Available online 23 July 2011