

Massive On-X mitral mechanical prosthetic valve thrombosis in NYHA class I patient

Masywna zakrzepica mechanicznej mitralnej protezy zastawkowej On-X u pacjenta w I klasie NYHA

María Elena Arnáiz-García¹, José María González-Santos¹, Javier López-Rodríguez¹, Alberto Iscar-Galán², María José Dalmau-Sorlí¹, Ana María Arnáiz-García³

¹Cardiac Surgery Department, University Hospital of Salamanca, Salamanca, Spain

²Cardiology Department, University Hospital of Salamanca, Salamanca, Spain

³Internal Medicine Department, University Hospital Marques de Valdecilla, Santander, Spain

A 75-year-old female patient was previously diagnosed with rheumatic mitral heart valve disease and chronic atrial fibrillation. Eight years ago she underwent mitral valve replacement by mechanical prosthesis On-X 29. She followed anticoagulant treatment and remained asymptomatic since surgery. However, in the last seven months she has suffered three transient ischaemic attacks. She always maintained functional class I, without other accompanying symptoms except neurological events. Reiterative inadequate levels of anticoagulation were verified during the last few months (international normalised ratio < 2.5). Given her previous history and symptoms, a cardioembolic origin for neurological ischaemic episodes was considered. Transoesophageal echocardiography was performed showing a huge thrombus adhered to the prosthesis and a secondary massive mitral regurgitation (Fig. 1A–C). A three-dimensional-ultrasound echocardiography confirmed severe mitral regurgitation (Fig. 1D). Reoperation for mitral valve replacement was decided. Through median sternotomy and under cardiopulmonary bypass, we accessed the left atrium via trans-septal superior. The mitral valve was explored and a massive prosthetic mitral valve thrombosis was confirmed. Thrombi were found attached to the atrial side of the mitral prosthesis covering it in a large surface and blocking both prosthetic discs (Fig. 1E). An initial thrombectomy was performed to remove most of the thrombus attached to the prosthesis and to prevent potential embolisms. Then, a prosthetic valve explantation was carried out and was replaced by a porcine bioprosthesis heart valve Labcor 29. The patient had an uneventful recovery and was discharged 10 days postoperatively. Prosthetic valve thrombosis is not rare but is a life-threatening complication in patients submitted for heart valve replacement. Maintaining adequate level of anticoagulation therapy is vital to avoid prosthetic thrombosis overall in cases of mechanical prosthesis implanted in the mitral position. Exceptional cases remain asymptomatic. Progressive dyspnoea and signs of heart failure in a patient with poor compliance of anticoagulation therapy suggest a prosthetic thrombosis. The presence of ischaemic neurological or peripheral events can become clues for diagnosis of this entity.

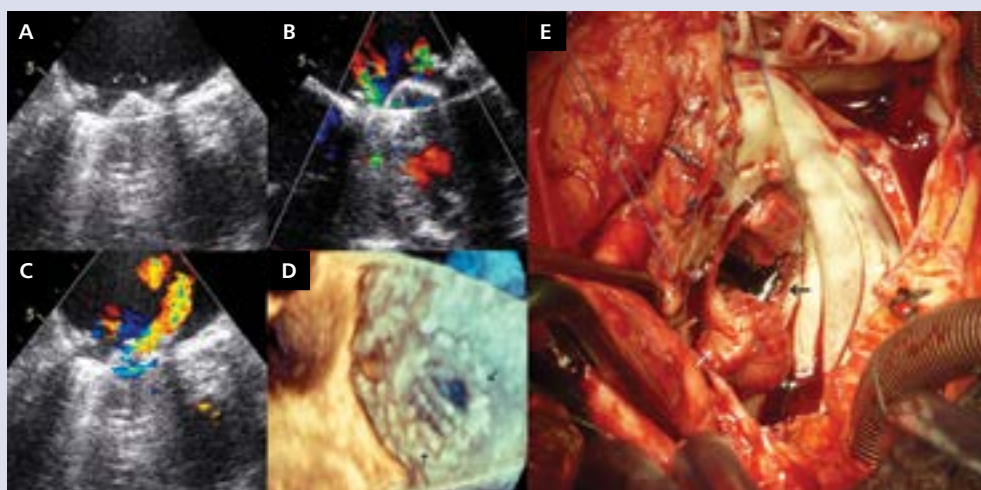


Figure 1. A–C. Transoesophageal echocardiography showing thrombus adhered to the prosthesis and mitral regurgitation; D. Three-dimensional-ultrasound image confirming mitral insufficiency (black arrows); E. Intraoperative view showing large obstructive prosthetic mitral valve thrombosis (white arrow). Thrombi covering almost the entire prosthesis surface, blocking both prosthetic discs (black arrow)

Address for correspondence:

Dr María Elena Arnáiz-García, Cardiac Surgery Department, University Hospital of Salamanca, Paseo San Vicente 58-182, 37007-Spain, tel: 00 34923291263, fax: 00 34923291263, e-mail: elearnaiz@hotmail.com

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