

Complete section of anterior mitral valve during percutaneous valvuloplasty

Amparo Benedicto^{1*}, MD; Guillermo Reyes², MD; Rio Aguilar¹, MD; Fernando Alfonso¹, MD

1. Cardiology Department, Hospital Universitario de la Princesa, Madrid, Spain; 2. Cardiac Surgery Department, Hospital Universitario de la Princesa, Madrid, Spain

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A 35-year-old female was referred for mitral percutaneous valvuloplasty due to a symptomatic rheumatic lesion (severe stenosis with 15 mmHg mean gradient, mild to moderate regurgitation and a Wilkins score of 6).

The basal haemodynamic layout recorded a 23 mmHg mean gradient and a 55 mmHg “v” wave, even if on angiography the regurgitation was quantified as moderate. What drew our attention was an image in the diaphragmatic left ventricular side, originating in the valvular plane, suggesting a severe shortening and chordal fusion (**Figure 1A**).

A 26 mm Inoue-Balloon Catheter (Toray, Tokyo, Japan) was employed. The post-valvuloplasty angiogram showed massive mitral regurgitation.

Transthoracic (TTE) (**Figure 1B, Moving image 1**) and transoesophageal (**Figure 1C, Moving image 2, Moving image 3**) echocardiography (TEE) revealed the complete section of the anterior mitral leaflet, from the free edge to the ring with massive mitral regurgitation (**Appendix Figure 1**). The valve was severely thickened with both commissures fused.

Urgent surgery was performed. The direct broken valve inspection supported the TEE findings, consistent with severe rheumatic damage both to the leaflet and to the subvalvular apparatus (**Figure 1D**).

Mitral percutaneous valvuloplasty is supported by years of experience, a previous proper assessment of the involvement of each valvular element being crucial.

Conflict of interest statement

The authors have no conflicts of interest to declare.

Supplementary data

Appendix Figure 1. Massive mitral regurgitation in the long parasternal view.

Moving image 1. Complete anterior leaflet section in the short-axis TTE view.

Moving image 2. Complete anterior leaflet section in the long-axis TEE view.

Moving image 3. Massive acute mitral regurgitation in the TEE.

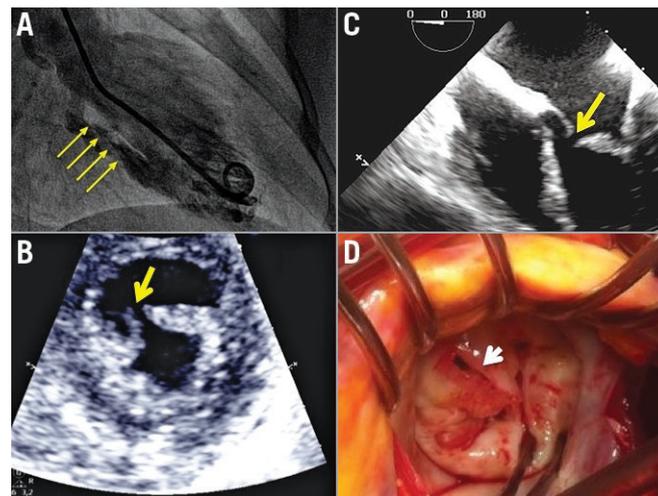


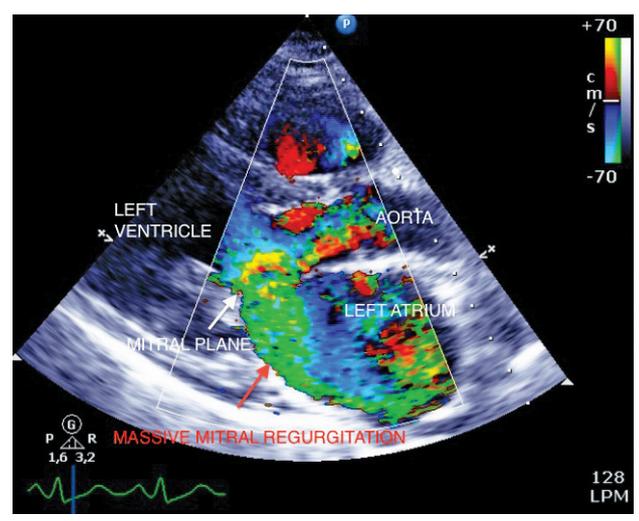
Figure 1. Mitral valve angiographic, echocardiographic and direct views. A) Ventriculography suggesting a severe shortening and chordal fusion. B) Short-axis TTE: section from free edge to the ring. C) Four-chamber TEE: section in the thickened anterior mitral leaflet. D) Surgical view, correlating with echocardiographic findings.

*Corresponding author: Hospital Universitario de la Princesa, Calle de Diego Leon, 62, 28006 Madrid, Spain.

E-mail: ambebe2000@yahoo.es



Supplementary data



Appendix Figure 1. Massive mitral regurgitation in the long parasternal view.