



## Percutaneous closure of multiple mitral paravalvular leaks

### Cierre percutáneo de múltiples fugas paravalvulares de prótesis mitral

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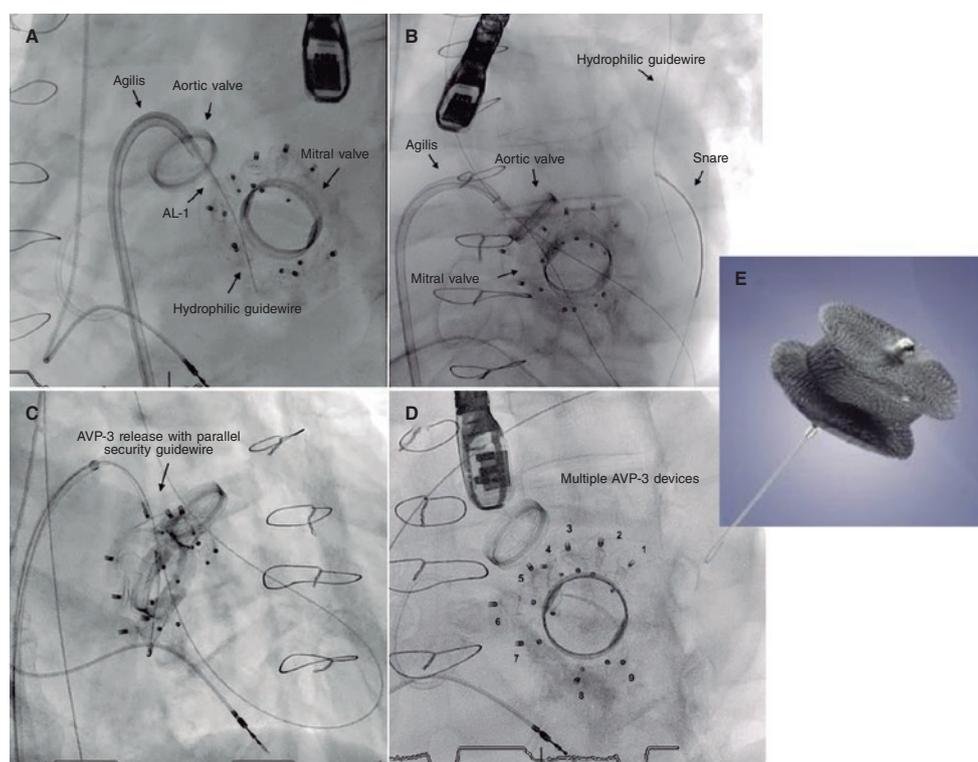


Figure 1.

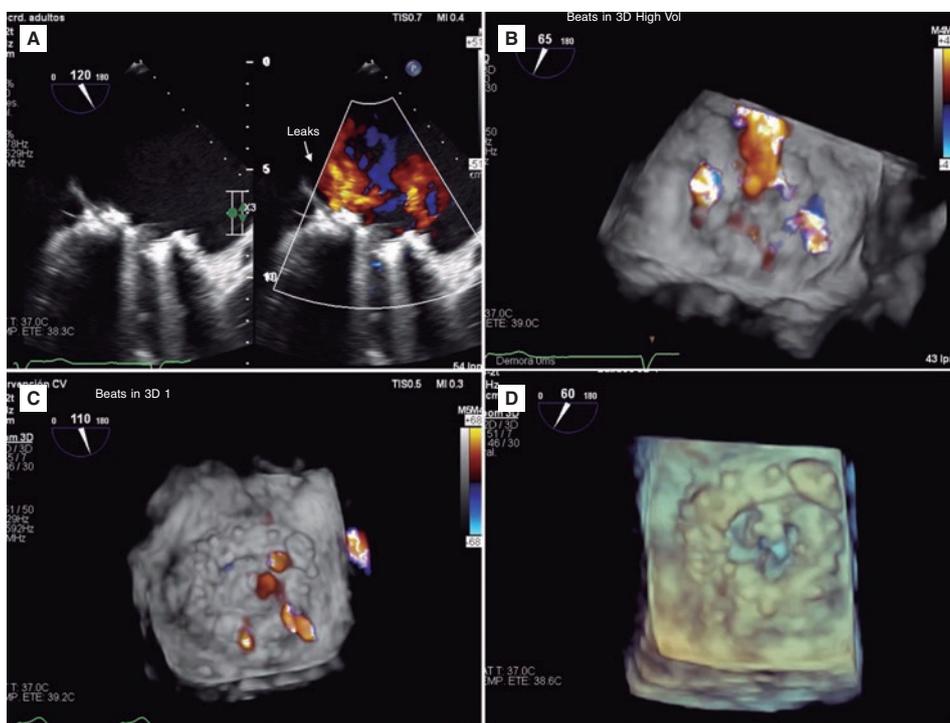
Sixty-six-year-old male patient with a past medical history of mitral and aortic valve replacement in 1983. Back in 2005 he underwent a new aortic valve replacement due to prosthetic valve dysfunction. In 2018, also due to prosthetic valve dysfunction, a new mitral valve replacement was performed with a size 27 Bicarbon Fitline heart valve (Sorin Group, Italy).

Three months later the patient was hospitalized with functional class III-IV heart failure according to the New York Heart Association (NYHA) and hemolytic anemia with multiple mitral paravalvular leaks quantified as severe regurgitation. In a single medical-surgical session it was decided to perform percutaneous treatment due to the patient's high surgical risk. Informed consent was obtained for medical procedures and the use of anonymous clinical information. The percutaneous closure of the leaks was performed using 7 Amplatzer Vascular Plug III devices (figure 1E) that resulted in minimal residual leaks.

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**Figure 2.**

In 2019 the patient presented with NYHA functional class III-IV and hemolytic anemia back again. The 3D echocardiogram performed revealed the presence of 2 severe mitral paravalvular leaks (figure 2A,B) (video 1 of the supplementary data). Percutaneous approach was attempted. An antegrade venoarterial circuit via transseptal puncture was built using a 0.035 in hydrophilic guidewire (figure 1A,B) (videos 2 and 3 of the supplementary data), 2 12/5 mm Amplatzer Vascular Plug III devices were implanted (figure 1C) (videos 4 and 5 of the supplementary data), and 9 devices of the same type surrounding the prosthetic circumference (figure 1D and figure 2D) (video 6 of the supplementary data). The procedure was completed uneventfully. The transesophageal echocardiography performed during the procedure confirmed the reduction of mitral paravalvular leaks now quantified as mild regurgitation (figure 2C) (video 7 of the supplementary data). Disease progression was good, and the patient was discharged with NYHA functional class II-III, corrected anemia (hemoglobin of 12 g/dL), and outpatient follow-up.

## FUNDING

None.

## AUTHORS' CONTRIBUTION

All authors have participated in the conception, design, data collection, analysis and interpretation of information.

## CONFLICTS OF INTEREST

I. Cruz González is proctor for Abbott.

## SUPPLEMENTARY DATA



Supplementary data associated with this article can be found in the online version available at <https://doi.org/10.24875/RECICE.M20000166>.