

## Image in cardiology

# Transapical Access Closure of a Mechanical Mitral Prosthesis Leak

## Cierre vía transapical de *leak* sobre prótesis mitral mecánica

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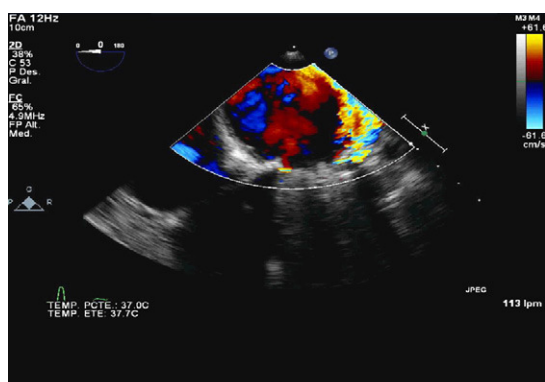


Figure 1.

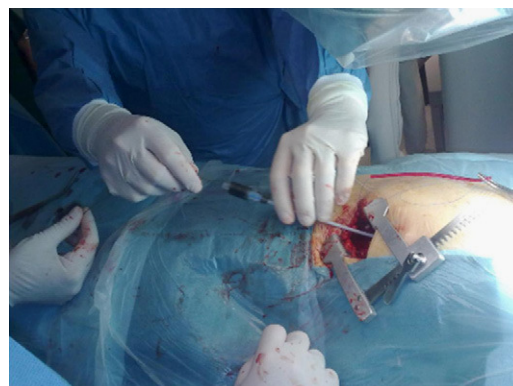


Figure 2.

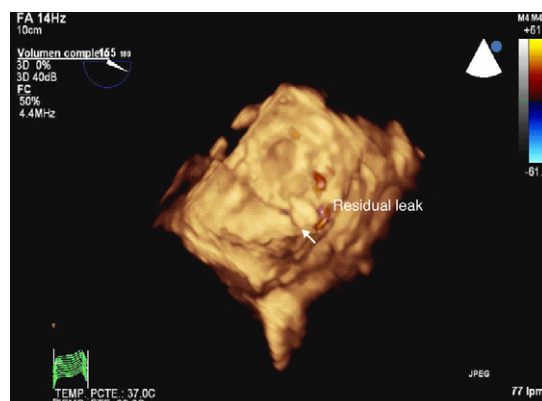


Figure 3.

A 62-year-old woman with a history of rheumatic mitral valve disease and commissurotomy closed in 1969, implantation of a Shiley biological mitral prosthesis in 1978, and its replacement in 1998 by a No. 25 Bjork mechanical prosthesis, showed symptoms consistent with congestive heart disease and analytical findings indicating hemolytic anemia. Transesophageal echocardiography detected 2 mitral periprosthetic leaks, a severe one at P2 and a mild one at P3 (Fig. 1).

A decision was made to close the P2 leak, but because the patient had undergone 3 previous heart surgeries, a minimally invasive approach by transapical route was chosen, this being the simplest technique.

The procedure was carried out in the operating room with the patient under general anesthesia. A left minithoracotomy was performed (Fig. 2) with apical access, and an Amplatzer device was implanted over the P2 defect under radioscopic and transesophageal echocardiographic guidance (Fig. 3); the outcome was satisfactory.

At hospital discharge 5 days later, the patient was asymptomatic and laboratory analyses showed no hemolysis. At 10 days, a transesophageal echocardiographic follow-up study showed that the procedure had been effective, with only a minimal residual leak.

Periprosthetic leaks are a relatively common finding (2% to 3% of mitral prosthesis implantations). When they are severe, they tend to produce symptoms of congestive heart failure or hemolytic anemia.

Percutaneous closure is usually contemplated in patients with a history of several previous heart surgeries or multiple comorbid conditions. An anterograde (transapical) or retrograde (trans-septal) approach can be performed, with success rates of 60% to 90%.

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