

Combined interventional procedures for the best patient outcome: a case report

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Introduction: Recently, in patients undergoing catheter ablation of atrial fibrillation, the OPTION trial showed that left atrial appendage (LAA) closure was non-inferior to an oral anticoagulant in terms of risk of death from any cause, stroke or systemic embolism¹. The multiple studies showed that tricuspid transcatheter edge-to-edge repair (T-TEER) reduced the severity of tricuspid regurgitation and was associated with an improvement in quality of life^{2,3}.

Case report: In March 2021, a 76-year-old woman with a history of arterial hypertension was hospitalized with clinical signs of heart failure triggered by persistent atrial fibrillation. Echocardiography described preserved left ventricular systolic function, severe tricuspid regurgitation, mild mitral regurgitation and left atrial dilatation. She underwent right-sided catheterization, which did not reveal any criteria for pulmonary hypertension. Coronary angiography ruled out significant coronary artery disease. After discharge from hospital, she had several epistaxis and bleeding gums while taking full-dose rivaroxaban and lower-dose apixaban. In October 2021, she underwent a combined procedure, electrical isolation with pulsed field ablation (PFA) of the LAA with implantation of an Amplatzer Amulet 25 mm occluder (**Figure 1**) and PFA isolation of the pulmonary veins to prevent recurrence of per-

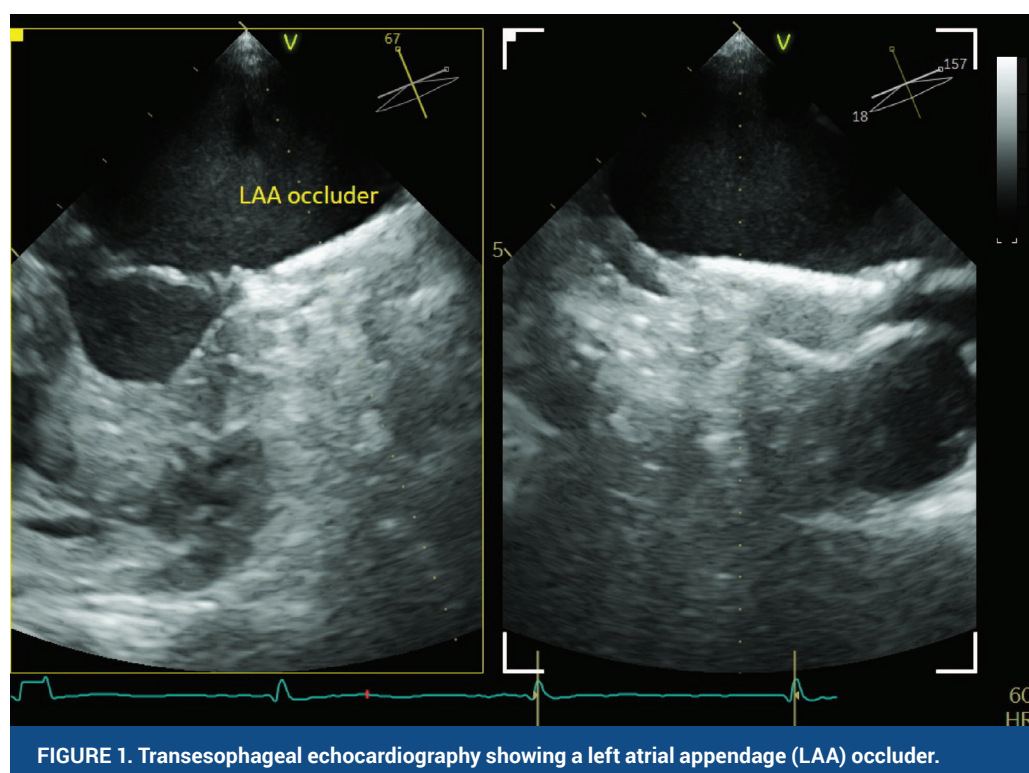


FIGURE 1. Transesophageal echocardiography showing a left atrial appendage (LAA) occluder.

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sistent atrial fibrillation. In October 2022, she was hospitalized for symptomatic bradycardia related to sinus node disease and a permanent pacemaker in AAIR mode was implanted. The patient remained symptomatic despite maintenance of sinus rhythm and optimal medical therapy (OMT) for heart failure. She was presented to the Heart Team and accepted as a candidate for T-TEER. Two cobalt-chromium clips [TriClip XTWx2] were placed in the target area of the tricuspid valve in the anteroseptal/posteroseptal coaptation gap (A-S / P1-S). Intraprocedural transesophageal echocardiography confirmed a significant reduction in tricuspid regurgitation (from severe to trivial) with the absence of significant anterograde flow obstruction and immediate improvement in hemodynamic parameters (**Figures 2 and 3**). During follow-up, the patient reported an improvement in symptoms.

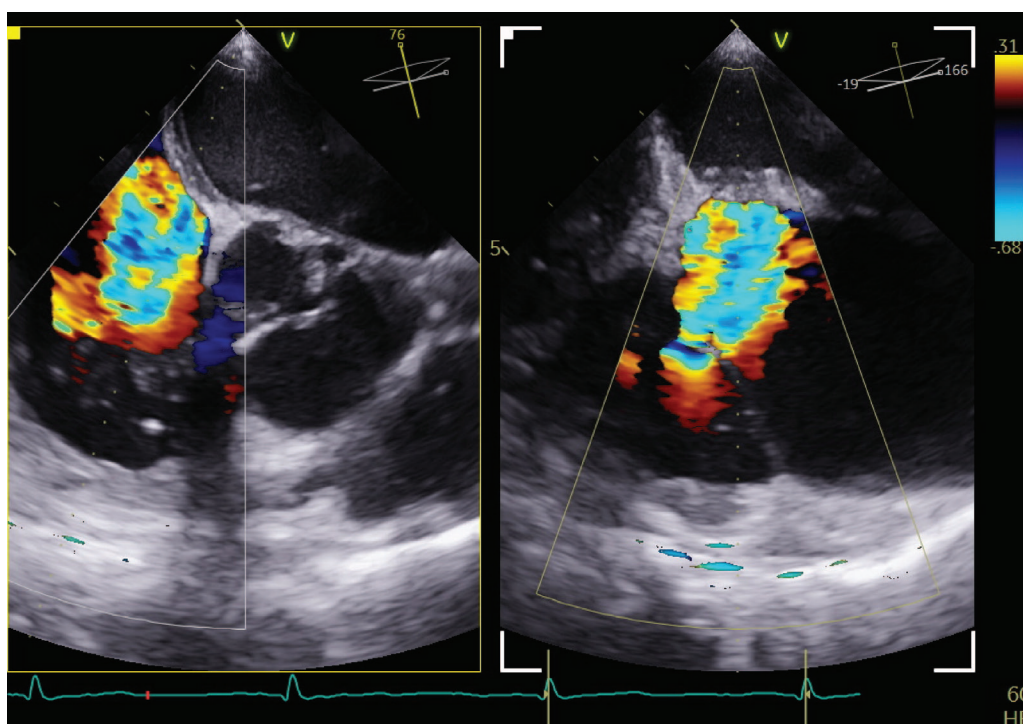


FIGURE 2. Transesophageal echocardiography showing massive tricuspid regurgitation before transcatheter edge-to-edge repair.

Conclusion: The use of interventional techniques such as catheter ablation and structural interventions in the elderly leads to a better quality of life and a reduction in symptoms of heart failure that persist despite OMT.

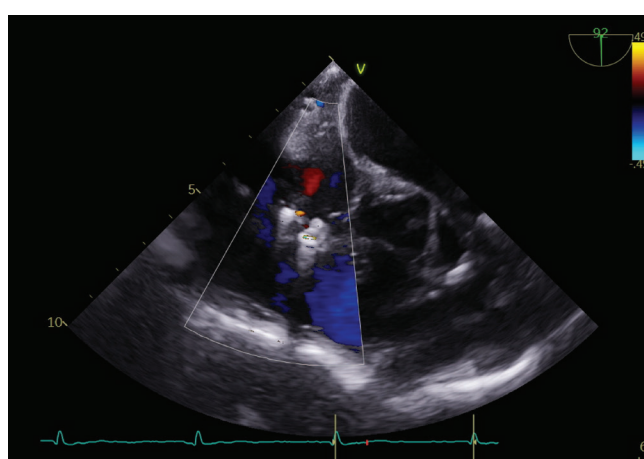


FIGURE 3. Transesophageal echocardiography showing reduction of tricuspid regurgitation to trivial levels after transcatheter edge-to-edge repair using two cobalt-chromium clips [TriClip XTWx2].

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