

IMAGES IN INTERVENTION

Simultaneous Percutaneous Closure of Left Atrial Appendage and Atrial Septal Defect After Mitral Valve Replacement



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A 66-year-old woman with a history of atrial fibrillation and previous mitral valve replacement (MVR) underwent new MVR because of dysfunction. After surgery, she was admitted because of recurrent cardioembolic strokes despite optimal treatment with warfarin. Aspirin was added, but the patient had a new stroke. Both MVRs were performed using a right atrial-transseptal approach, and the left atrial appendage (LAA) was ligated.

Transesophageal echocardiography was performed and, incomplete LAA closure with thrombus inside and a dehiscence of the atrial septum suture were detected (Figures 1A to 1C).

After discussion, the decision was made to perform percutaneous closure of the LAA and atrial septal defect in the same procedure. In addition, because of the potential risk for embolization of thrombi from the LAA during the procedure, it was decided to

deploy a cerebral protection device (Claret, Claret Medical, Santa Rosa, California).

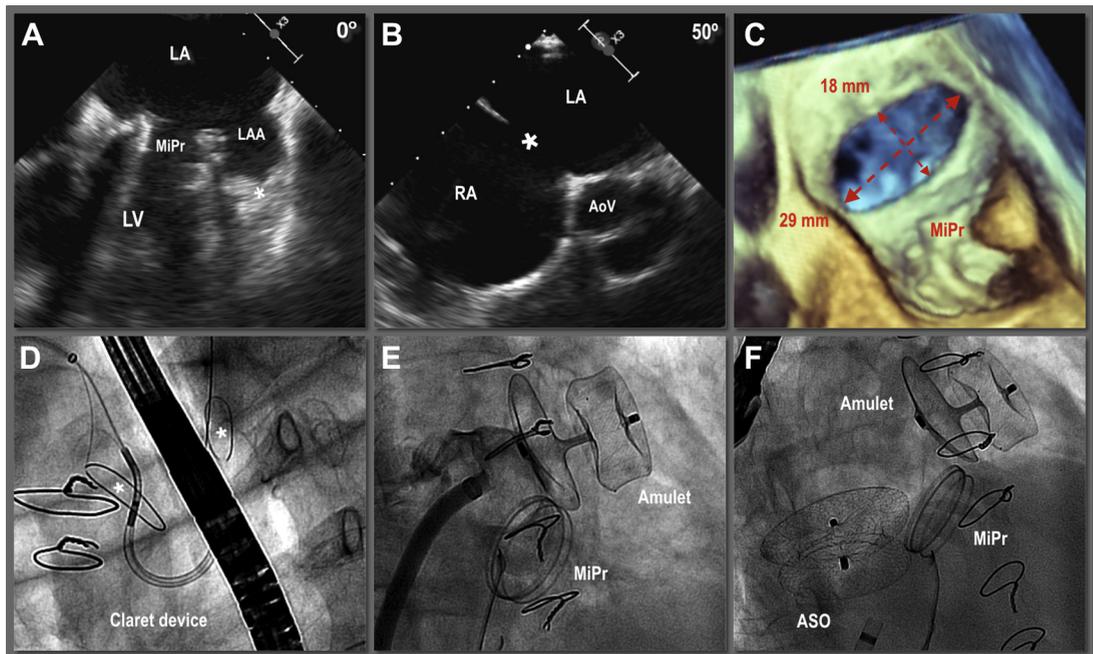
Once the Claret device was positioned (Figure 1D), LAA closure was performed with a 31-mm Amulet device (St. Jude Medical, St. Paul, Minnesota) (Figure 1E). Subsequently, the atrial septal defect was closed with a 32-mm Amplatzer septal occluder (ASO) (St. Jude Medical) (Figure 1F). Finally, the Claret device was removed.

Control cardiac tomography showed successful deployment and positioning of the Amulet and ASO devices without interference with the mechanical mitral prosthesis (Online Videos 1 and 2).

Three months after the procedure, the patient was asymptomatic, without recurrent strokes. To the best of our knowledge, this is the first case of simultaneous percutaneous closure of the LAA and an atrial septal defect after MVR with a cerebral protection device.

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FIGURE 1 Percutaneous Closure of Left Atrial Appendage and Atrial Septal Defect

(A) Two-dimensional transesophageal echocardiography (TEE) detected incomplete left atrial appendage (LAA) closure and thrombus inside (asterisk). (B,C) Two-dimensional and 3-dimensional TEE detected a dehiscence of the atrial septal (AS) suture (asterisk). (D) Claret device. (E) Angiography showing percutaneous LAA closure. (F) Final angiography showing LAA and AS defect closure devices. AoV = aortic valve; ASO = Amplatzer septal occluder; LA = left atrium; LV = left ventricle; MiPr = mitral prosthesis; RA = right atrium. See also [Online Videos 1 and 2](#).

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APPENDIX For supplemental videos and their legends, please see the online version of this article.