

# Images and Case Reports in Arrhythmia and Electrophysiology

## Locked Away

### Percutaneous Closure of a Malignant Left Atrial Appendage to Constrain an Unresolvable Thrombus

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In a 66-year-old male (CHA<sub>2</sub>DS<sub>2</sub>-VASc score=3) referred for catheter ablation of persistent atrial fibrillation, transesophageal echocardiography revealed a large left atrial appendage (LAA) thrombus (Figure A; Movie I in the [Data Supplement](#)), despite continuous treatment with rivaroxaban 20 mg daily.

One month after changing the antithrombotic regimen to a vitamin K antagonist, the patient experienced stroke with aphasia and right hemiparesis, despite borderline international normalized ratio (1.9). Neurological symptoms resolved within 7 days. After 12 weeks of therapy with documented international normalized ratio values in the therapeutic range, LAA thrombus did not resolve.

As a bailout strategy, it was decided to implant an LAA occluder (Amplatzer Amulet, St Jude Medical) proximal to the thrombus.

To avoid periprocedural embolization, no LAA angiography has been performed, and the device (22 mm) was advanced to the landing zone under transesophageal echocardiography guidance. Successful LAA closure was confirmed

by color doppler imaging and a single postocclusion angiography (Figure C and D; Movie II in the [Data Supplement](#)).

The patient was discharged on dual antiplatelet therapy (aspirin 100 mg + clopidogrel 75 mg daily) which was continued for 6 weeks. After exclusion of on-device thrombus clopidogrel was discontinued. Atrial fibrillation catheter ablation was performed two months later.

In general, the presence of LAA thrombus is a contraindication to interventional occluder implantation. However, in exceptional cases, when various antithrombotic therapies fail to resolve a LAA thrombus percutaneous occlusion may serve as a bail-out strategy to prevent further embolic strokes. Special implant techniques avoiding mechanical mobilization of the thrombotic mass may be advisable.

#### Disclosures

Boris Schmidt is a consultant to St Jude Medical and Boston Scientific. The other authors report no conflicts.

KEY WORDS: atrial fibrillation ■ left atrial appendage ■ occluder ■ stroke prevention ■ thrombus

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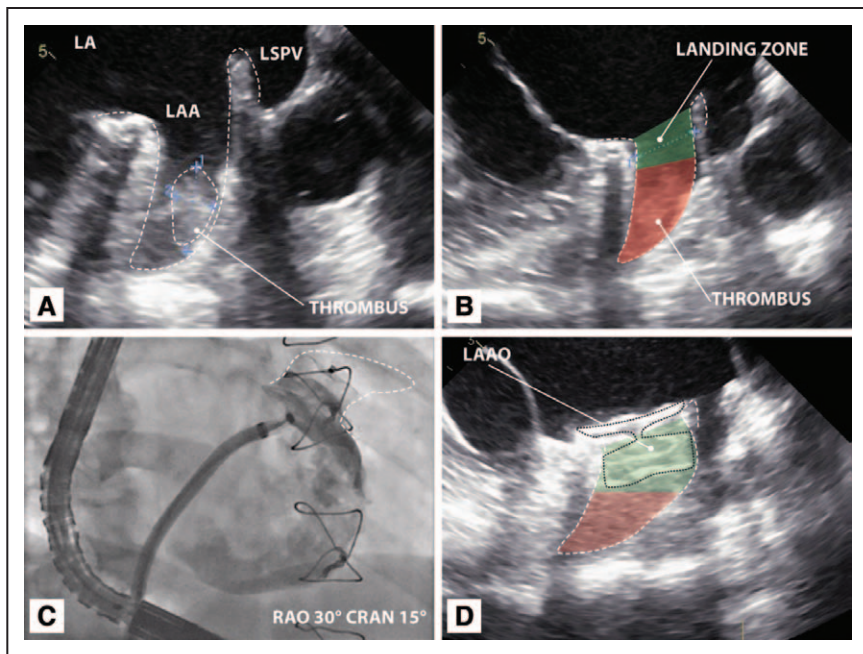
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**Figure. A**, Two-dimensional transesophageal echocardiography (TEE) image showing thrombus inside left atrial appendage (LAA; diameter 9×19 mm). **B**, LAA landing zone in 2-dimensional TEE. The measured diameter was 19 mm. **C** and **D**, Fluoroscopy and 2-dimensional TEE images showing the released LAA occluder device. LA indicates left atrium; LAAO, left atrial appendage occluder; and LSPV, left superior pulmonary vein.

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