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Unexpected Murmur after Percutaneous Left Atrial Appendage Occlusion

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In patients with atrial fibrillation (AF) and contra-indications for long-term anticoagulant therapy, left atrial appendage (LAA) occlusion may be considered for stroke prevention. We report the case of an 83-year-old woman, known with permanent AF, who developed significant digestive bleeding under normal dose new oral anticoagulant (NOAC) (dabigatran 2×150 mg/day). She was, therefore, switched to anti-vitamin K anticoagulation. Maintaining INR within the therapeutic range proved to be challenging. A few years later she presented with a transient ischemic attack. Subsequently, she was switched again to low dose apixaban 2×2.5 mg/day, adjusted for age

(>80 years) and weight (<60 kg). Despite adequate dose reduction she complained of recurrent epistaxis and gingival bleeding. Since she had both high thromboembolic risk (CHA₂DS₂-VASc-score = 6) and high bleeding risk (HAS-BLED-score = 5) percutaneous LAA occlusion was proposed with an Amplatzer™ Amulet™ LAA Occluder. Transesophageal echocardiography (TEE) showed no morphologic contra-indications: broad LAA without trabeculations and an orifice diameter of 27 mm in 45° view on TEE (Figure 1a). Subsequently an Amplatzer™ Amulet™ LAA Occluder with 31 mm diameter was placed under echocardiographic guidance (Figure 1b) and before release all

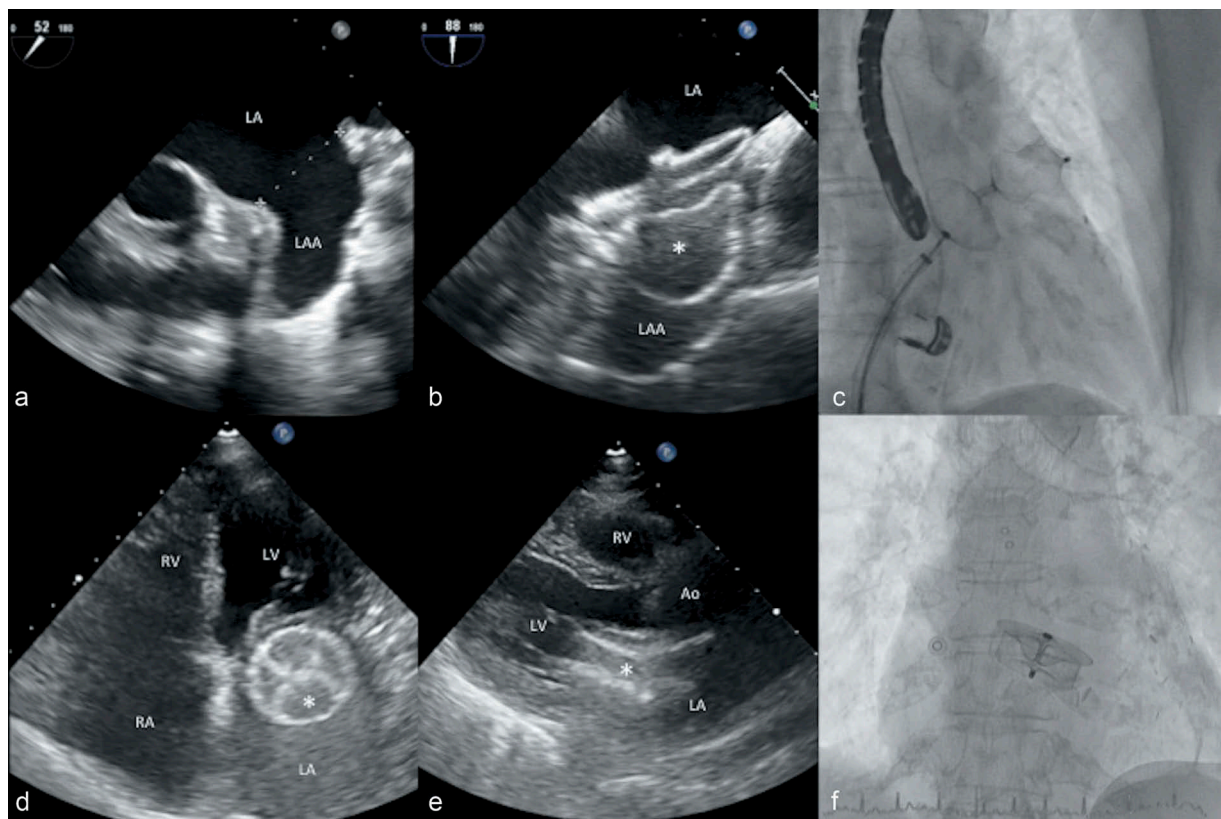


Figure 1. Pre- and post-LAA occluder placement images. (a) Transesophageal echocardiography (TEE) before device implantation. (b) TEE showing appropriate device placement. (c) Successful stability (tug) test during angiography face view (Online Video 1). Device dislocation on respectively (d) transthoracic apical 4-chamber view (Online Video 2), (e) transthoracic parasternal long axis view (Online Video 3), and (f) angiography face view (Online Video 4). Abbreviations: Ao, aorta; LA, left atrium; LAA, left atrial appendage; LV, left ventricle; RA, right atrium; RV, right ventricle; *LAA occluder.



echocardiographic and angiographic criteria for proper device placement¹ were fulfilled with successful stability (tug) test (Figure 1c and Supplemental Online Video 1). Despite being asymptomatic, auscultation of the patient revealed a new diastolic cardiac murmur 4/6 the day after implantation. Echocardiography showed dislocation of the LAA occluder, which was vigorously moving in the left atrium causing intermittent mitral obstruction/stenosis (Figure 1d–f and Supplemental Online Videos 2–4), requiring urgent surgical removal.

In conclusion: meeting all current echocardiographic and angiographic criteria for proper device placement is apparently no guarantee for success.

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Disclosure statement

The authors report no conflicts of interest.

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