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Disappearing left atrial thrombus with a hollow core during anticoagulation therapy

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Description

Left atrial thrombi with a hollow core are sometimes detected in patients with Atrial Fibrillation (AF) and Flutter (AFL) by Transesophageal Echocardiography (TEE). In previous studies, this finding at the initial assessment denotes relatively fresh and acute growing thrombus with inner liquefaction [1-3]. However, its significance during anticoagulation treatment is unknown.

A 60-year-old man with AF and AFL admitted to our hospital because of heart failure. After 60 mg edoxaban once daily was administered for one week, a TEE was performed in advance of electrical cardioversion. Moderate spontaneous echo contrast was observed in left atrium and 11 mm × 12 mm isoechoic round thrombus in Left Atrial Appendage (LAA) was detected (Figure 1A and B), then cardioversion was cancelled. One week later, a repeated TEE was performed. The outer diameter was unchanged but echolucent area was appeared in the center of

the thrombus (Figure 1C and D). Then anticoagulation therapy was continued. After 3 days, the thrombus was completely diminished assessed by TEE (Figure 1E and F). Brain Magnetic Resonance Imaging (MRI) and systemic contrast enhanced computed tomography revealed no thromboembolic event.

Recent studies have demonstrated the effectiveness of Direct Oral Anticoagulants (DOACs) for not only prevention but also treatment of LAA thrombus. In one prospective study, LAA thrombus resolution was seen in about 60% of patients treated with rivaroxaban for 6 weeks [4]. However, short-term sequential images of LAA thrombus dissolution during anticoagulation therapy are absent.

In our case, sequential TEE revealed that a hollow core of LAA thrombus was newly appeared during DOAC therapy just 3 days before complete dissolution. This echolucent change might reflect the process of clot lysis due to effective antico-

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agulation though thrombi usually shrink from the outside. In practice, when this clot appearance is observed for the first time during anticoagulation therapy, it is difficult to distinguish from fresh, unstable, and growing thrombus, therefore a careful follow-up is required. A TEE is a gold standard for detection and follow-up of LAA thrombus but some invasive, then other noninvasive modalities such as cardiac MRI are also considered for repeated examinations.

Conflict of interest: The authors declare that they have no conflict of interest.

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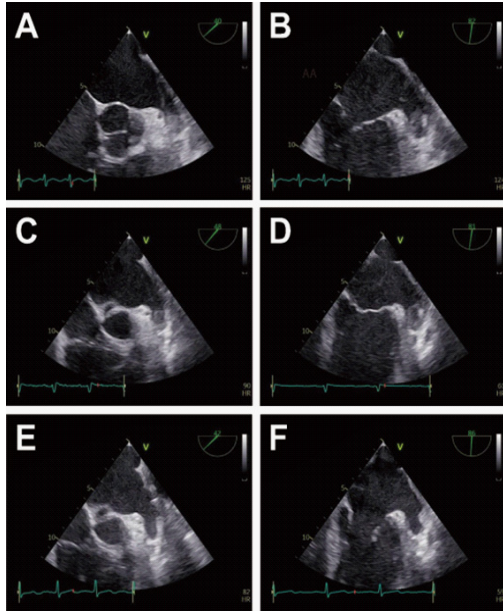


Figure 1: Sequential transesophageal echocardiography images of left atrial appendage thrombus. Panels A and B are 7 days, Panels C and D are 14 days, Panels E and F are 17 days after edoxaban administration, respectively.