

# Rapid thrombus formation at the beginning of a catheter ablation procedure for persistent atrial fibrillation

Szybkie utworzenie się skrzepliny na początku zabiegu ablacji cewnikowej przeprowadzonej z powodu utrwalonego migotania przedsionków

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A 59-year-old woman with a history of arterial hypertension and myocardial infarction of embolic origin (LVEF 35–40%) was referred in 2010 for catheter ablation of long-term persistent atrial fibrillation after 4 previous ablation procedures performed abroad. She presented with palpitations and dyspnoea. Warfarin was interrupted (INR 1.4) and enoxaparin 40 mg sc bid was initiated. Transoesophageal echocardiography was performed under general anaesthesia at the beginning of the procedure showing enlarged left atrium, spontaneous echocontrast, low left appendage velocities ( $v = 20$  cm/s) with some degree of sludge and absent thrombus (Fig. 1A). Within a few minutes after the introduction of single diagnostic catheter into the coronary sinus, well before transseptal puncture, fresh thrombus formation was observed in the left atrial appendage (Figs. 1B, C — arrow). Unfractionated heparin was administered intravenously activated clotting time (ACT)  $\approx 350$  s and the thrombus gradually resolved within 30 min. Subsequently, transseptal puncture was performed and re-isolation of the left pulmonary veins terminated the arrhythmia. Residual perimitral flutter was ablated at the mitral isthmus. No other arrhythmia was inducible and the patient has gone 43 months without any recurrence of arrhythmia. She continues anticoagulation therapy with warfarin. This case report challenges the common practice of administering heparin after transseptal puncture and maintaining ACT level during the procedure around 250 s. Several groups have confirmed that the risk of thrombus formation under such conditions could be as high as 10%. Early administration of heparin before transseptal puncture and increased intensity of anticoagulation (ACT > 300 s) were documented to prevent left atrial thrombus formation. Uninterrupted administration of warfarin may further decrease the risk of intraprocedural thromboembolic events.

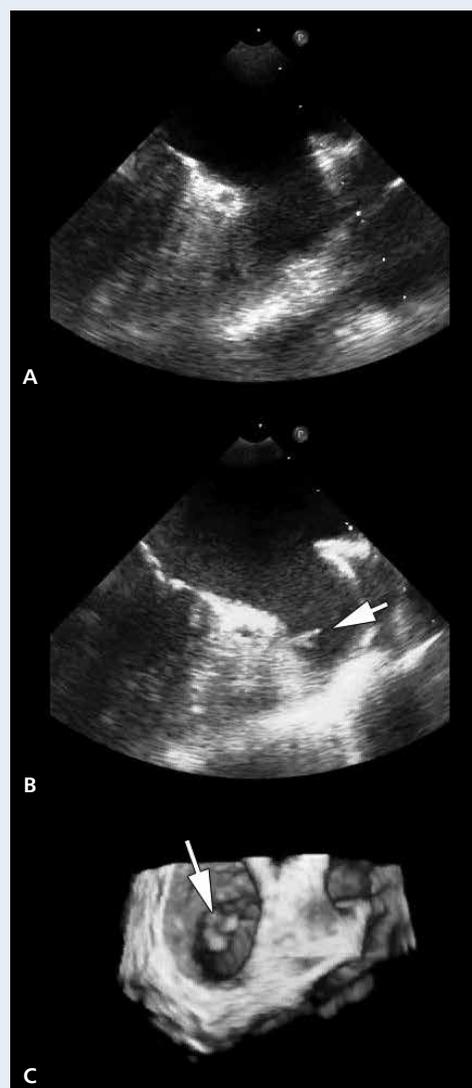


Figure 1. A–C. Rapid thrombus formation at the beginning of catheter ablation procedure for persistent atrial fibrillation (arrow)

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