

Intracardiac echocardiography to exclude thrombus in left atrial appendage when transoesophageal echocardiography is uninterpretable

Echokardiografia wewnątrzsercowa jako narzędzie do wykluczenia skrzepliny w uszku lewego przedsionka, gdy wynik echokardiografii przezprzełykowej jest niemożliwy do interpretacji

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Transoesophageal echocardiography (TEE) remains the gold standard for exclusion of left atrial appendage (LAA) thrombus in patients scheduled for direct cardiac cardioversion (DCC) or atrial fibrillation (AF) ablation. However, in very rare cases, visualisation of LAA by TEE may be difficult or impossible due to extensive reverberations. In such cases, cardiac computed tomography (CCT) can be performed to exclude thrombus; however, CCT imaging requires contrast injection, exposes the patient to X-rays and is not 100% sensitive and specific for LAA thrombus detection. Recently, intracardiac echocardiography (ICE) has been shown as a useful tool to provide excellent LAA images and to assess the presence of the LAA thrombus when TEE images are inconclusive. We hypothesised that when TEE is uninterpretable due to reverberations, ICE may be valuable option for detection of the LAA thrombus. We present a case of a 75-year-old woman after mitral commissurotomy and dual-chamber pacemaker implantation, who had persistent AF, chronic heart failure, hypertension, history of transient ischaemic attack, and pulmonary embolism. The international normalised ratio on warfarin was labile. The CHA₂DS₂-VASc score was 7 and HAS-BLED was 1. The patient was admitted to our hospital for DCC. TEE was performed; however, because of excessive reverberations, the LAA could not be visualised and the presence of thrombus could not be reliably assessed. We decided to perform ICE from the pulmonary artery (Fig. 1) and right atrium (Fig. 2). The image quality was excellent, thrombus in the LAA was excluded, and an effective DCC was performed. No bleeding or embolic complications occurred. This case report shows that ICE is a valuable option for LAA assessment when TEE is uninterpretable due to excessive reverberations.



Figure 1. Intracardiac echocardiography probe placed in the pulmonary artery (PA) and showing left atrial appendage (LAA) without thrombus; LA — left atrium

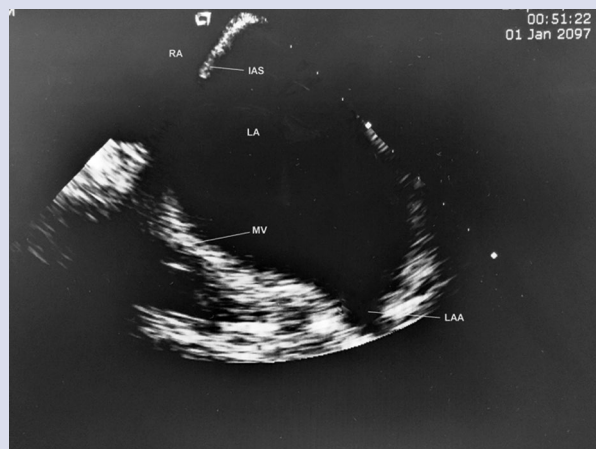


Figure 2. Intracardiac echocardiography probe placed in the right atrium (RA) and showing left atrial appendage (LAA) without thrombus; IAS — interatrial septum; LA — left atrium; MV — mitral valve

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