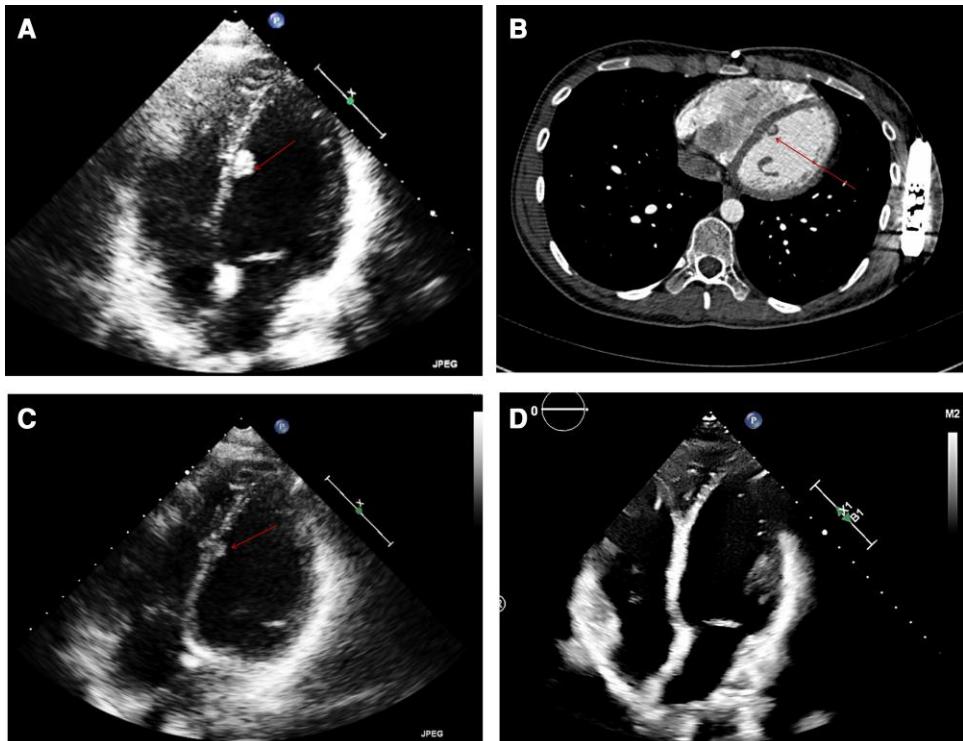


Septal thrombus formation after subcutaneous implantable cardioverter shock in a young female with dilated cardiomyopathy

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We present the case of a 26-year-old woman with dilated cardiomyopathy caused by a desmoplakin truncating variant. She had a subcutaneous implantable cardioverter (S-ICD) implanted for primary prevention 2 years earlier based on left ventricle ejection fraction

(LVEF) of 45% and subepicardial late gadolinium enhancement (LGE) in anterolateral and inferolateral segments on cardiac magnetic resonance (CMR). After medical treatment, LVEF improved to 51%.

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An incidental 11 mm rounded mass attached to the septum was found during routine echocardiography (*Panel A*, [Supplementary material online](#), [Video S1](#)). Left ventricle ejection fraction was normal and the septum did not show motion abnormalities. The patient referred an inappropriate S-ICD shock 6 months earlier but no other symptoms.

A computed tomography scan confirmed the presence of a mass attached to the endocardium by a small pedicle (*Panel B*) suggesting a thrombus as the most likely diagnosis.¹ After the initiation of oral anticoagulation, serial echocardiograms showed a progressive reduction of the size of the mass until its complete disappearance (*Panels C and D*, [Supplementary material online](#), [Videos S2 and S3](#)). Once anticoagulation was halted, no relapse was observed during a 5-month follow-up period.

An extensive work-up excluded frequent causes of hypercoagulability. Intracardiac thrombi are extremely rare in patients with normal or mildly reduced LVEF.² The temporal association with the S-ICD shock, made us hypothesize a possible link between the shock and the thrombus formation. To our knowledge, no cases of thrombus formation after S-ICD shock have been described.³ Nevertheless, the confluence of factors (Virchow's triad) in the ventricle after S-ICD shock: decreased wall motion due to stunning, local endothelial damage, and coagulopathy previously described in high-voltage electrical injury,⁴ might have facilitated thrombus formation. Our case should increase awareness of this rare complication and promote imaging assessment after S-ICD shocks.

Supplementary material

Supplementary material is available at *European Heart Journal – Case Reports*.

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Slide sets: A fully edited slide set detailing this case and suitable for local presentation is available online as [Supplementary data](#).

Consent: Consent for publication has been obtained from the patient in line with the COPE best practice guidelines.

Conflict of interest: None declared.

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Data availability

The data that support the findings of this study are available from corresponding author upon reasonable request.

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