CARDIOVASCULAR FLASHLIGHT

doi:10.1093/eurheartj/ehaa363

An unexplained recurrent syncope

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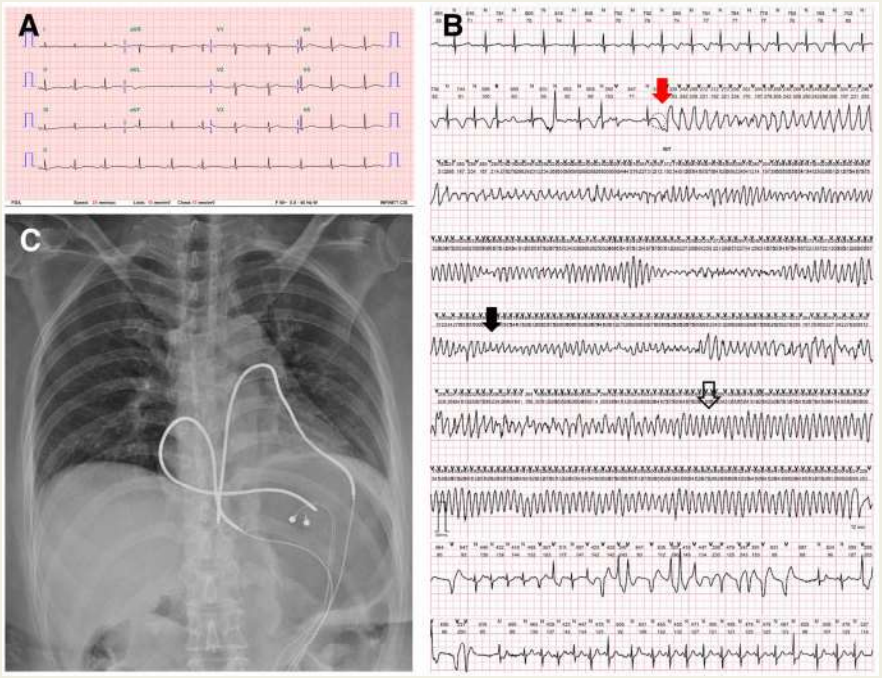

A 40-year-old woman had sought medical help for more than 4 years for unexplained recurrent syncope that occurred once every 3–4 months. The patient has normal QT interval at baseline in a 12-lead electrocardiography (ECG) (*Panel A*). Records from 24-h Holter monitoring and electrophysiological studies showed unremarkable results. Carotid duplex, tilt-table test, and heart magnetic resonance imaging (MRI) findings were unremarkable as well. Finally, a 14-day patch monitor clearly detected a period of arrhythmia events starting from R-on-T phenomenon with Torsades de Pointes (*Panel B*, red arrow), degenerated into ventricular fibrillation (*Panel B*, black arrow), and then self-organized into ventricular flutter (*Panel B*, hollow arrow) and recovered to sinus rhythm in the end. Genetic testing revealed congenital long QT syndrome (type II, KCNH2 mutation). Syncope caused by self-terminating ventricular fibrillation is very rare, and the underlying mechanism is unknown. Following recommendations set out in current guidelines, she underwent single chamber, single coil implantable cardioverter defibrillator (ICD) implant.

Ten days later, she was diagnosed with a pocket infection of oxacillin-sensitive *Staphylococcus aureus*. The wound was not healing and *Klebsiella pneumonia* bacteraemia followed, necessitating complete removal of the ICD leads and generator. Contralateral reimplantation with a new ICD was suggested, but was refused by the patient. Because no subcutaneous ICD was available, an epicardial ICD was successfully implanted (*Panel C*) 1 month later, after eradication of the bacteria. A TYRX absorbable antibacterial envelope was used during the operation. The patient was discharged eventually, with no complications observed to date during outpatient department follow-up.