


Possible late diagnosis of the Brugada syndrome in a patient presenting with a primary cardiac arrest

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A 38-year-old male was cardioverted from a primary ventricular fibrillation (VF) arrest. Following a history, examination, and investigations, including an electrophysiology study and flecainide challenge, no cause was established. An implantable cardioverter-defibrillator (ICD) with an active fixation dual-coil Riata lead was implanted. During 9-year follow-up, no ventricular arrhythmias were detected and serial electrocardiograms (ECGs) remained normal.

During scheduled ICD generator change, an R-wave synchronized shock of 33 J was delivered between the generator can and the distal shock coil. The shock coil impedance was normal at 69 Ω. Intracardiac electrograms (EGMs) were recorded prior to lead testing (Figure A) and immediately post-test (Figure B). The EGM immediately after shock delivery showed transient elevation in the ST segment suggestive of a Type 1 Brugada pattern (Figure B), which normalized in <1 min. It is possible this change represents a transient repolarization abnormality. Although not conclusive, these changes suggest the shock revealed a possible underlying Brugada type change, in a patient previously presenting with primary VF of undiagnosed cause.

This case demonstrates a potentially unique discovery of Brugada syndrome during ICD testing and emphasizes the transient nature of the ECG changes.

The full-length version of this report can be viewed at: http://www.escardio.org/communities/EHRA/publications/ep-case-reports/Documents/possible-late-diagnosis.pdf.