A 38-year-old man underwent the catheter ablation for recurrence of atrial fibrillation (AF). He presented paroxymal AF at the age of 34 years old and underwent the pulmonary vein isolation (PVI) at age 36. His resting ECG showed no Brugada pattern. After the second session of PVI, during the ablation in the left atrium under the guidance of complex fractionated atrial electrograms (CFAEs), profound vagal stimulation was induced, which caused a prolonged atrioventricular block (Picture 1). The ventricular asystole caused a marked ECG change mimicking the type-1 Brugada pattern with an inverted T wave (arrow). Finally, it led to degeneration to ventricular fibrillation (VF; Picture 2, arrows), which was immediately converted to sinus rhythm by DC delivery. Electrogram-based catheter ablation, targeting CFAEs, is empirically known to be effective in halting persistent AF (1). Increased vagal tonus complicated with CFAE-guided ablation, however, can produce a pause-dependent dispersion in ventricular transmural repolarization to generate VF.

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Reference