Apical Ventriculotomy Scar: A Rare Focus of Ectopic Ventricular Ryhthm

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A 50-year-old gentleman presented to the out-patient department with complaints of episodic palpitations. He had a history of multiple ventricular septal defects (VSD) as a child, which were repaired via an apical ventriculotomy in 1983. He also had a history of long-standing atrial fibrillation, which was rate-controlled with β-blockers. On physical examination, he had an irregularly irregular pulse with a prominent jugular venous pulse, an apical pan-systolic murmur and audible third heart sound (S3). A 12-lead electrocardiogram was obtained (Figure 1), which showed no discernible p-waves along with some fibrillatory activity seen in precordial lead V1 (red arrow in Figure 2). Ventricular depolarization by both native (marked "N" in Figure 2) and ectopic (star in Figure 2) foci was seen. On the other hand, analysis of the ectopic ventricular complex (star in Figure 2) suggested an origin from the left ventricular (LV) apex. The patient underwent an electrophysiology study, which revealed inducible ventricular tachycardia arising from an ectopic focus in LV apex; this was ablated successfully using transcatheter techniques. Patient did not report any palpitations at a one-year follow-up visit.

Figure 1: ECG showing no discernible p-waves

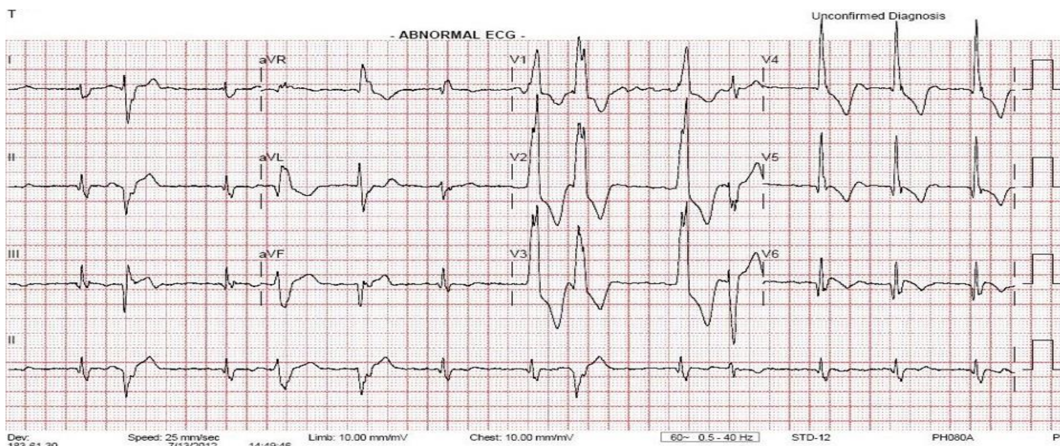
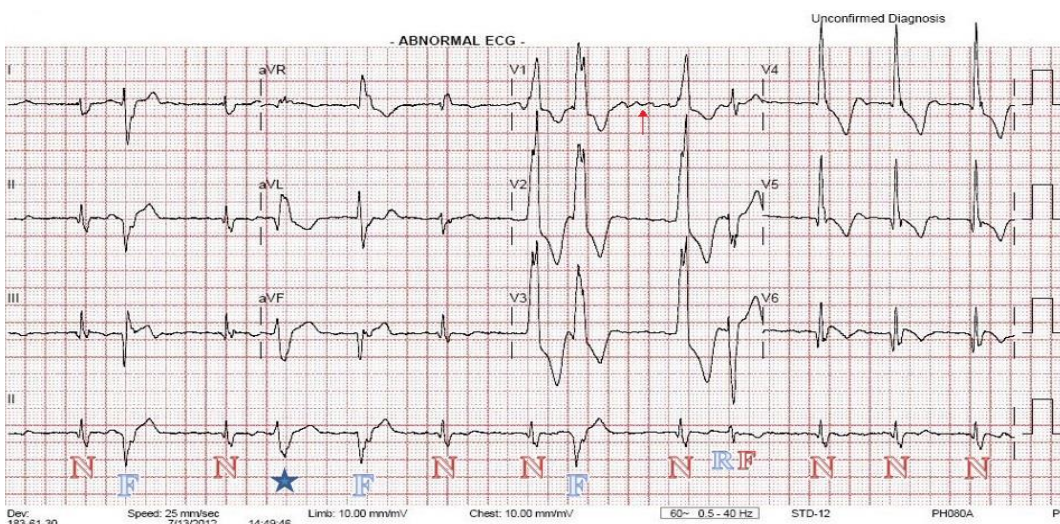


Figure 2: ECG showing ventricular depolarization



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