Monomorphic Ventricular Tachycardia

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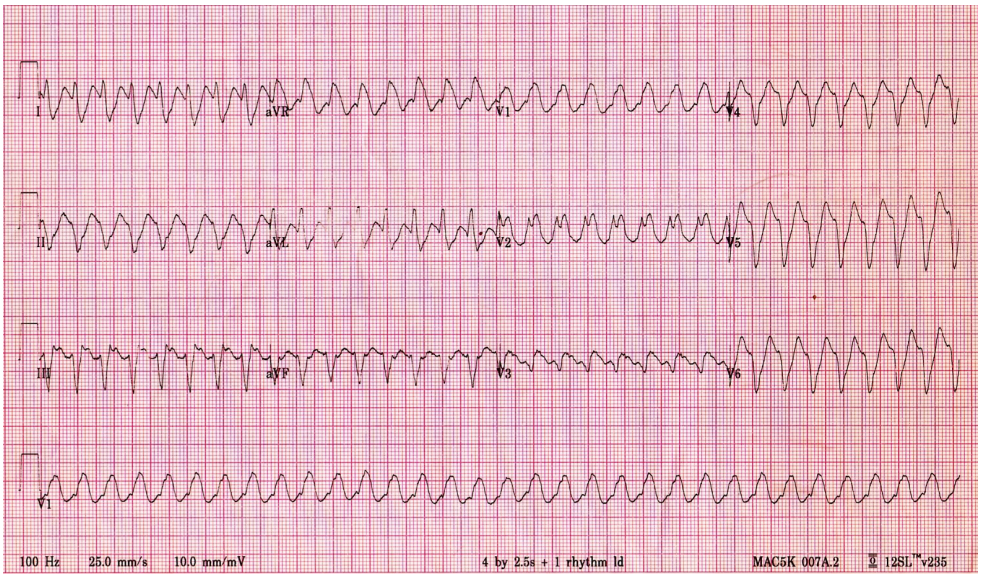

An 83-year-old male with known coronary artery disease presented to our emergency department (ED) with a complaint of palpitations and associated minor chest discomfort while on his way to play a round of golf. Vital signs were significant for a blood pressure at 122/76 mmHg, heart rate at 180 beats per minute, respiration rate at 20 breaths per minute, temperature at 37ºC, and SpO2 at 98% on room air. A 12-lead ECG showed a wide-complex tachycardia with no clearly discernible P waves and was thought to represent monomorphic ventricular tachycardia. Initial treatment with procainamide was attempted; however, within minutes of receiving this medication, his blood pressure dropped to 70/40 mmHg. Procedural sedation using etomidate and fentanyl, followed by electrical synchronized cardioversion using a biphasic defibrillator at 200J, successfully converted his rhythm to a sinus rhythm.

The differential diagnosis for a wide-complex (i.e. QRS 0.12sec) regular tachycardia with no clearly discernible P waves prior to each QRS complex includes ventricular tachycardia, supraventricular tachycardia with preexisting or rate-related bundle branch block (e.g. SVT with LBBB), and supraventricular tachycardia with antidromic conduction through an accessory pathway (e.g. antidromic WPW). Several proposed criteria may aid in the differentiation of these entities.[1,2] Contemporary teaching, however, mandates that a wide-complex tachycardia should be presumed ventricular tachycardia if the diagnosis is ambiguous. [3]

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