Vasospasm-induced polymorphic ventricular tachycardia

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Figure 1) Electrocardiogram revealing a heart rate of 55 beats/min; ST elevation in leads II, III and aVF, with reciprocal ST depression in leads I and aVL and upsloping ST depression in leads V1 to V4, demonstrating inferior and posterior wall myocardial ischemia

A 63-year-old man was admitted for workup of syncope and episodic, midsternal chest pain of one-year duration. During another episode of chest pain after admission, the electrocardiogram (Figure 1) revealed a heart rate of 55 beats/min; ST elevation in leads II, III and aVF; with reciprocal ST depression in leads I and aVL and upsloping ST depression in leads V1 to V4, demonstrating inferior and posterior wall myocardial ischemia. The telemetry rhythm strip (Figure 2) revealed ST elevation followed by wide-complex polymorphic ventricular tachycardia at 300 beats/min, characteristic of torsades de pointes that resolved 5 min later. Cardiac enzymes were within normal limits. Transthoracic echocardiography showed no ventricular dysfunction or wall motion abnormalities and cardiac catheterization revealed no evidence of stenotic coronary artery disease. These findings demonstrate polymorphic ventricular tachycardia in the setting of variant or Prinzmetal's angina in the absence of obstructive coronary artery disease (1). The patient was subsequently treated with felodipine and a nitroglycerin patch to prevent episodes of variant angina, and reported no further episodes in six months of follow-up (2).

Figure 2) Telemetry rhythm strips revealing ST elevation followed by wide-complex polymorphic ventricular tachycardia at 300 beats/min, characteristic of torsades de pointes that resolved 5 min later. Strip 1 Vasospasm; Strip 2 Polymorphism; Strip 3 Normal sinus rhythm after sublingual nitroglycerin was given

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