

ECG Contest

Response to ECG, April 2017



Respuesta al ECG de abril de 2017

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The correct response is number 4. The ECG shows a slow rise of the initial upstroke of the QRS complex, with a Q wave > 40 ms in lead aVR, a monophasic R wave in lead V₁, and an rS pattern in lead V₆; together with the patient's disease profile, these findings are strong indicators of monomorphic ventricular tachycardia due to myocardial reentry (response 1, Figure 1).^{1,2} Moreover, the ECG findings almost certainly exclude nodal reentrant tachycardia with right bundle branch block or monomorphic ventricular tachycardia due to bundle branch reentry (responses 2 and 3).

In the ECG, the polarity of the slow rise of the initial upstroke of the QRS complex was positive in leads V₁ to V₅ and the inferior leads and negative in lead I, a pattern compatible with a preexcited tachycardia via a left lateral accessory pathway (response 4). The sinus rhythm ECG (Figure 2) shows a heartbeat with no initial Q wave in V₆ and no initial R wave in V₁, indicating the presence of preexcitation.¹

During electrophysiological analysis, stimulation from the distal coronary sinus reproduced the tachycardia morphology (Figure 3). A 1:1 conduction perimitral atrial flutter equivalent to the clinical tachycardia was induced via a left lateral accessory pathway. Both arrhythmias were successfully ablated.

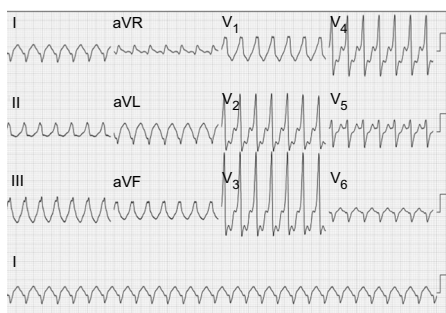


Figure 1.

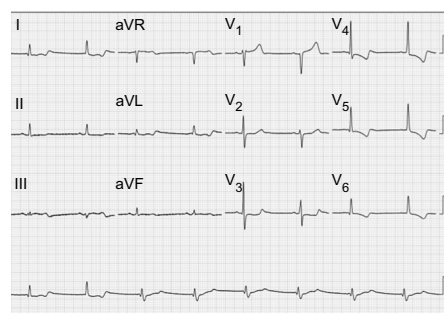


Figure 2.

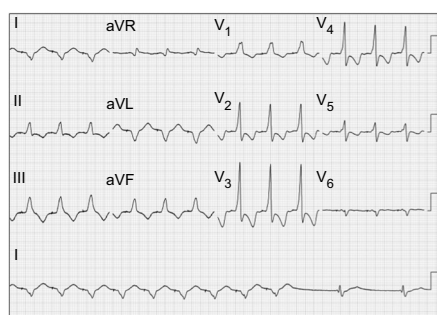


Figure 3.

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