ECG Contest

Response to ECG, November 2017

Respuesta al ECG de noviembre de 2017

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The patient presented with bradycardia-tachycardia syndrome that activated the rate damping algorithm used in many pacemakers (correct diagnosis, response 2). This algorithm prevents sudden rate decreases in patients with paroxysmal bradycardia. If the spontaneous rate decreases (125 bpm, Figure A, arrows), the pacemaker paces at a slightly lower rate than the previous one (107 bpm, Figure A, asterisks), gradually decreasing to the lower rate limit or until the patient's own rhythm is reestablished. On deactivating the algorithm (Figure B), the pacemaker directly paces at the lower rate limit if a pause occurs. The findings have nothing to do with sensor function (response 1 incorrect) as the patient is at rest and the accelerometer sensor would not be activated. We are not faced with an endless-loop tachycardia (response 3 incorrect) as this would require atrial sensing, which is not possible in VVI devices. Finally, the device is not an automatic search for pacing threshold (response 4 incorrect) as pacing would occur at a slightly higher rate than the spontaneous one, with the test ending with a capture failure.

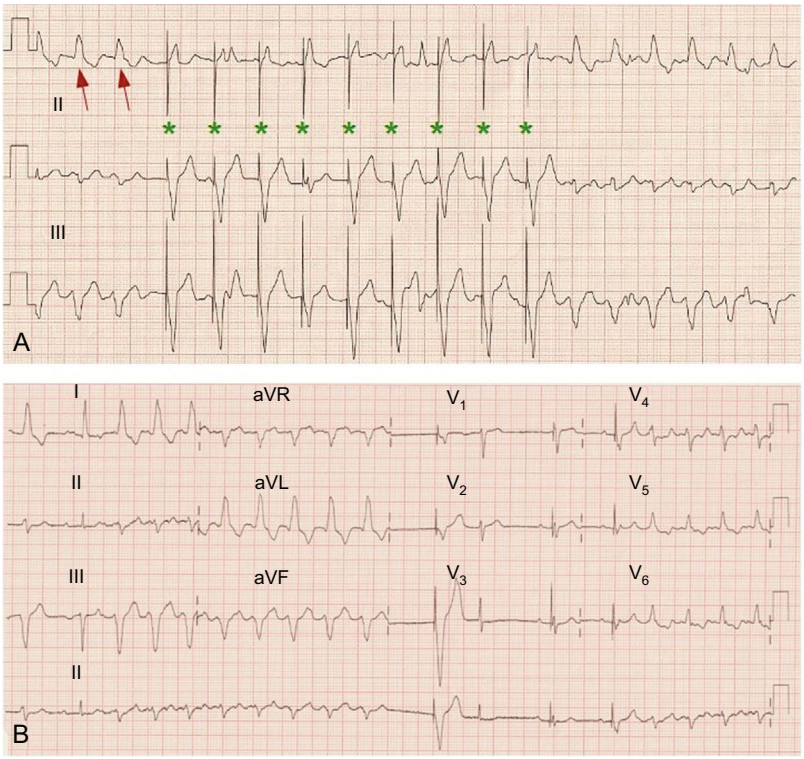

Figure.

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