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ECG Contest

Response to ECG, September 2020

Respuesta al ECG de septiembre de 2020

Kinán Rajjoub Al-Mahdi,[a,*] Juan Diego Sánchez Vega,[b] and Ez Alddin Rajjoub Al-Mahdi[b]

[a] *Pabellón Docente, Hospital Universitario 12 de Octubre, Facultad de Medicina, Universidad Complutense de Madrid, Madrid, Spain*
[b] *Servicio de Cardiología, Hospital Universitario Ramón y Cajal, Madrid, Spain*

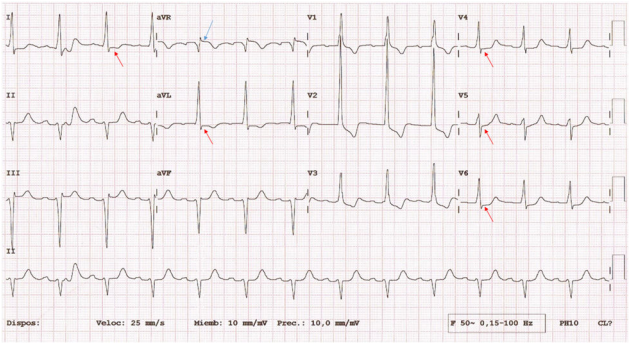

Figure 1.

LEFT SEPTAL FASCICULAR BLOCK CRITERIA
Prominent anterior QRS forces: large R wave in right-middle precordial leads (R V2 > 15 mm), increasing from V2 to V2 or V3, and decreasing from V2 or V3 to V4-V6.
Absence of first septal vector (1_{AM}): no initial q V5-V6 or r V1-V2
Prolongation of septal activation time: Intrinsicoid deflection time in V1-V2 (≥ 35 ms), although LSFB does not lead to broad QRS (>120 ms) on its own.
Negative T waves in right precordial leads

Figure 2.

The ECG before the procedure shows advanced right bundle branch block and negative T waves in leads aVF and III.

Figure 1 shows first-degree atrioventricular block and QRS of 120 ms with anterior-superior fascicular block and prominent anterior QRS forces (PAF), ST-T depression (upward arrows), and ST-T elevation in aVR (downward arrows), and repolarization changes resulting from the ischemia.

The differential diagnosis for PAF includes pre-excitation via a left lateral accessory pathway (option 2 incorrect, long PR), inferolateral infarction (option 3 incorrect, diffuse changes in repolarization point to left coronary artery or multivessel disease), right ventricular growth, and left septal fascicular block (LSFB).[1] Acute pulmonary embolism, unlike chronic pulmonary hypertension, does not present with a monophasic R wave in the right precordial leads (option 1, incorrect).

The transient nature of PAF, along with the clinical context and presence of LSFB criteria (figure 2),[2] supported the final diagnosis (option 4, correct). LSFB develops mainly due to proximal obstruction of the left anterior descending artery, before the first septal perforating branch.

REFERENCES

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2. Pérez-Riera A, Barbosa-Barros R, Baranchuk A. *Left septal fascicular block: characterization, differential diagnosis and clinical significance.* 1.ª ed. Londres: Springer Publishing Company; 2016:35–40.

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* Corresponding author:
E-mail address: krajjoub@ucm.es (K. Rajjoub Al-Mahdi).

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