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A young man with exertional chest discomfort

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Answer

Out-of-hospital electrocardiogram (ECG) shows a sinus rhythm of 85 beats per minute (bpm), narrow QRS complex, and ST-segment elevations in leads V1–V4 (coved morphology in V1–V2), with a terminal negative T wave in V1–V2 (Fig. 1). ECG findings could be suspicious for acute anteroseptal myocardial infarction, but reciprocal ST-segment changes are lacking. The ECG is also suggestive of a coved-type Brugada-like pattern, and the patient had no history of syncope or any other cardiac symptom, nor a family history of unexplained sudden cardiac death.

The patient met criteria for exertional heat stroke [1], and was admitted to the intensive care unit for rhythm monitoring. Fluid therapy was started, and within the first 2 hours the ECG showed sinus bradycardia of 48 bpm, normalised ST segment, QTc of 430 ms, and prominent U waves in V2–V3 (Fig. 2), remaining with similar features during the hospital stay. Echocardiogram and computed tomography coronary angiography performed before discharge were normal.

Diffuse ST-T deviations have been described in patients with heat stroke [2], but right precordial leads ST elevation suggestive of Brugada pattern in this context is exceptional [3]. Ion channels sensitive to tempera-

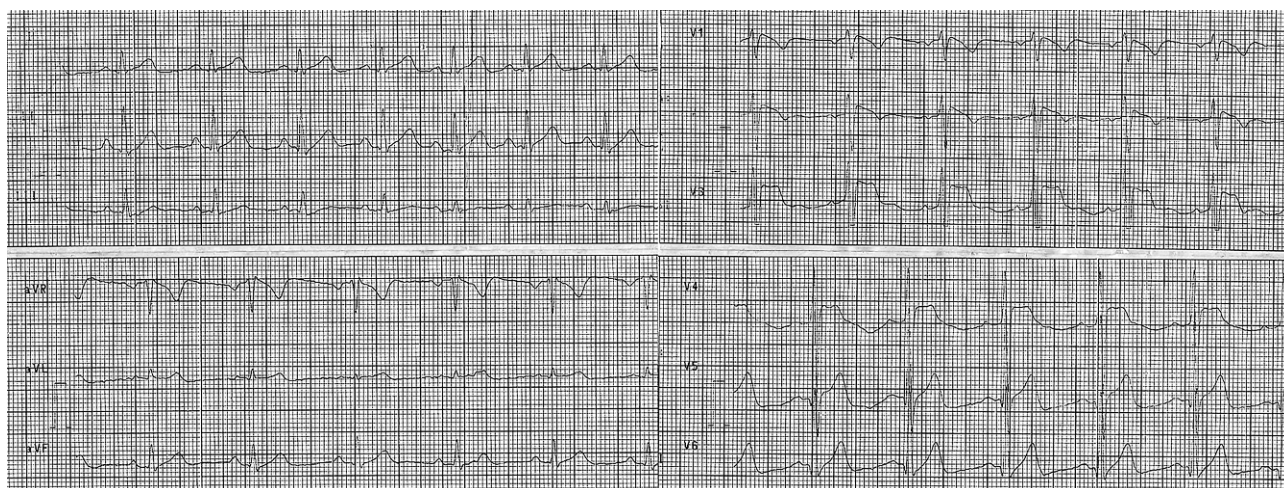
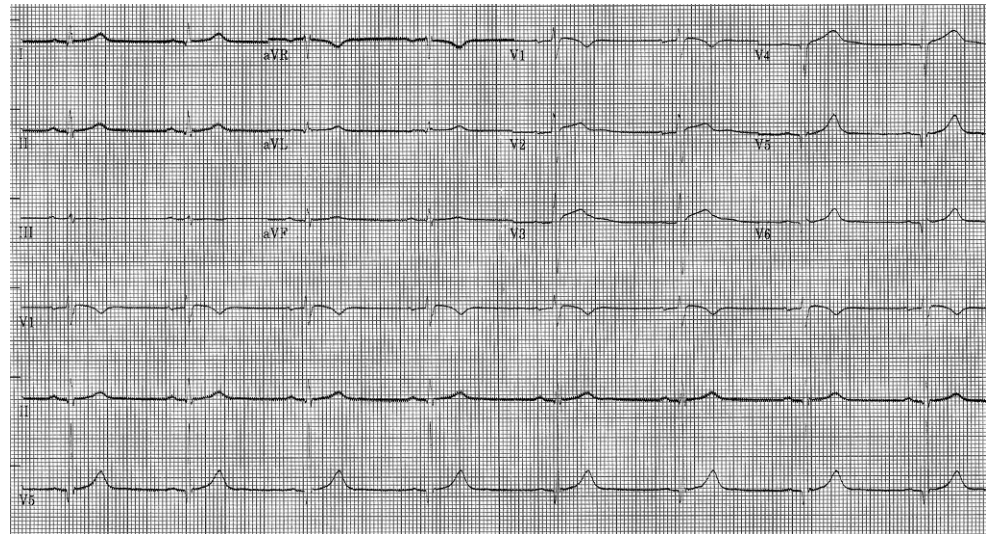


Fig. 1 Out-of-hospital ECG at first medical contact

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Fig. 2 ECG obtained in the Intensive Care Unit



ture may explain this electrocardiographic finding in susceptible individuals. In the present case, the rapid resolution of ECG abnormalities favours the diagnosis of Brugada-like ECG pattern induced by exertional heat stroke, and a negative ajmaline provocation test reinforces the diagnosis.

Conclusion

Type 1 Brugada-like ECG pattern induced by exertional heat stroke.

Conflict of interest L.E. Lezcano Gort, B. Roque Rodríguez and M.R. Porro Fernández declare that they have no competing interests.

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