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IMAGES IN CARDIOLOGY

doi: 10.1136/hrt.2006.104844

Hyperpotassaemia masquerading acute myocardial infarction

A 59-year-old woman, admitted for elective substitution of a hip prosthesis, developed dyspnoea and hypotension. She had a previous history of diabetes and slight chronic renal failure. The 12-lead electrocardiogram showed wide bizarre QRS, with elevation of the ST-segment in leads D3, aVF and V1 (panel A). The cardiologist was called with the initial diagnosis of inferior acute myocardial infarction. The analysis of blood showed pH 6.91, and potassium 9.4 mEq/l. The ECG 24 hours later, with normal potassium and normal pH, did not show any significant anomalies (panel B). Cardiac serum markers, including cardiac troponin I, and echocardiographic segmental wall motion, were normal.

Current guidelines of the acute coronary syndromes highlight the need for an ECG in 5–10 minutes, in order to identify those patients with ST-segment elevation. However, there are cases in which the ECG is difficult to understand, as in the case that we present here. Ahead of an electrocardiogram with very aberrant morphology, it is imperative to search for severe electrolyte disturbances. That can be achieved quickly with any portable blood gas and electrolyte analyser, so it will not add more than a few minutes to the management of a suspected myocardial infarction.

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