An unusual case of coronary mimicry

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DESCRIPTION

A 64-year-old man with no significant medical history was referred to the emergency department (ED) due to acute chest pain, suggestive of an acute coronary syndrome. Acetylsalicylic acid 500 mg and glyceryl trinitrate spray had been administered in the ambulance, and when the patient arrived in the ED the chest pain had subsided significantly. At presentation, he was markedly hypertensive (240/110 mm Hg). A first ECG (figure 1A) demonstrated left ventricular hypertrophy, but was otherwise unremarkable. However, since troponin T levels were slightly elevated (32 ng/L, upper reference limit 14 ng/L), intravenous nitroglycerine was started and 5000IE of heparin was administered.

Twenty-eight minutes later his condition deteriorated: the chest pain increased and he developed

significant abdominal pain and diaphoresis. A second ECG (figure 1B) showed an episode of junctional rhythm (51 bpm), whereas CT scan demonstrated an active abdominal bleeding originating from the right adrenal region extending cranially to the diaphragm (figure 2A, B).

Conservative treatment (thrombocyte transfusion and blood pressure control) was initiated in the intensive care unit, where he made a full recovery. During follow-up, metanephrine, normetanephrine and 3-methoxytyramine levels were not elevated, and a fluorodeoxyglucose (FDG) positron-emission tomography CT scan did not demonstrate an increased FDG uptake in the renal/adrenal region; the bleeding was presumed to be related to severe essential hypertension.

Figure 1 (A) ECG demonstrating sinus rhythm with left ventricular hypertrophy with negative T waves in lateral leads. (B) ECG demonstrating junctional rhythm (with sinus rhythm in last two beats).

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Figure 2 (A and B) Large haematoma originating from the right adrenal region with contrast density centrally, indicative of active bleeding.

Learning points

- ▶ Intra-abdominal bleeding can present similarly to an acute coronary syndrome (ACS), and should be considered in patients presenting with symptoms suggestive of an ACS before treatment is initiated.
- ▶ ECG changes due to extra cardiac disease (known as coronary mimicry), can be present in a variety of conditions.¹ Our case is the first to describe ECG changes in relation to intra-abdominal bleeding.
- ▶ The exact mechanism of the reversible ECG changes seen in cases of intra-abdominal bleeding remains uncertain. A vagally mediated reflex to pain has been postulated for other abdominal causes of ECG changes. In addition, adrenal gland hormone release resulting from adrenal compression might play a role. Finally, hypovolemic shock due to bleeding can lead to ischaemia.

Contributors FM and RB were involved in direct patient care. JC reviewed the CT scan. RB and EtA drafted the manuscript.

Competing interests None.

Patient consent Obtained.

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