
Negative results - Vascular general

Unilateral adrenal haemorrhage following systemic thrombolysis

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Abstract

We report a case of unilateral adrenal bleeding, worsened or initiated by systemic thrombolytic therapy given for a suspected myocardial infarction. Initial clinical diagnosis was ruptured aortic aneurysm or aortic dissection. A preoperative contrast-enhanced computer tomography (CT) scan showed a possible bleeding from the left adrenal gland. An emergency left subcostal retroperitoneal approach revealed a ruptured and bleeding adrenal gland and its arteries were ligated.

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1. Case report

A 58-year-old man was admitted in a circulatory unstable condition. His symptoms were acute postprandial pain in the upper left quadrant of the abdomen. A chest X-ray and an electrocardiogram (ECG) were obtained, the ECG showed ST elevations and he was given systemic thrombolytic therapy for a suspected myocardial infarction. His condition worsened following the abrupt onset of haemorrhagic shock. Hence he was transferred to our department by helicopter; on arrival, his blood pressure was 90/60 mmHg and heart rate 150 beats/min. Initial suspected diagnosis was a ruptured aortic aneurysm or an aortic dissection. He had no history of trauma and was not on any regular medication. Previous medical history included a left kidney stone and an episode with a persistent nasal bleed.

Physical examination did not reveal any palpable mass in an obese abdomen and the point of maximal tenderness was still in the upper left quadrant. Laboratory tests showed anaemia (haemoglobin: 8.5 g/dl) and normal electrolytes. The cause of bleeding was still uncertain after an abdominal ultrasound in the trauma room. Radiological imaging, CT scan with intravenous contrast, showed a retroperitoneal haematoma and a probable bleeding at the site of the left adrenal gland (Fig. 1). Because of ongoing bleeding the patient immediately underwent surgery with a left subcostal retroperitoneal approach. The adrenal gland was found ruptured. Visible adrenal gland tissue was removed and its bleeding arteries ligated. The patient recovered uneventfully and he continues to do well six months postoperatively (Fig. 2).

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enched his condition. The vascular supply to the adrenals makes them predisposed to haemorrhagic necrosis since three adrenal arteries divide into about 50 small branches, and one vein collects blood from the sinusoids [2]. This anatomy can make the bleeding adrenals a rather difficult target for endovascular therapy.

An identifiable risk factor is the presence of antiphospholipid antibodies (APL), and patients with APL are more susceptible to develop AH when exposed to surgery, infection or anticoagulation [8]. The majority of patients with adrenal bleeding do not have any signs of adrenal insufficiency. The most common symptoms are hypotension, confusion, lethargy, nausea, vomiting, tachycardia and fever. More specific symptoms as abdominal pain; central and radiating to the flank are present in 45% [9]. These symptoms together with anticoagulants and an elderly or very young patient should raise clinical suspicion. The essential diagnostic tool is CT [10]. Acute adrenal insufficiency (Addison crisis) may occur when the bleeding is bilateral. Such anticoagulant related adrenal insufficiency is potentially life-threatening but can easily be treated with steroids [5].

In this case, the retroperitoneal approach was chosen after CT examination. An emergency angiographic coiling was discussed with the radiologist on call but was considered not possible on this particular weekend night both due to anatomic considerations of the bleeding site and to the response time of the interventional radiologist. Conventional open surgery may still be a valuable tool in such cases.

References