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ENDOCRINE IMAGING

Spontaneous bilateral adrenal hemorrhage

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To the editor,

A 46 year old male with medical history of hypertension, gastroesophageal reflux disease (GERD) presented to emergency room with abdominal pain for over a month. He described his abdominal pain as crampy in nature and was mostly located in left flank. Upon further questioning he attested to a history of nausea with occasional vomiting, dizziness upon standing, and weight loss of about over 10 lbs in past 1 month. He also mentioned visiting his primary care doctor and emergency room for the abdominal pain in last month. He was told it is related to GERD or possibly a kidney stone and was discharged home. His physical examination at presentation revealed tachycardia, minimal left flank tenderness and was otherwise normal. Initial laboratory data revealed evidence of hyponatremia, acute kidney injury, and a lactate of 3.7 mmol/l. Few hours later, a CT of abdomen without contrast was performed which showed diffuse enlargement of bilateral adrenal glands with adjacent inflammatory changes and was reported not to have the appearance of adrenal hemorrhage (Fig. 1).

A random cortisol level was obtained and revealed a level 0.6 mcg/dl suggesting severe adrenal insufficiency. Soon after, patient was commenced on stress dose hydrocortisone. The first dose of hydrocortisone was given almost 10 h later to the presentation to the hospital. Within an hour of administration of steroids patient went into a cardiac arrest and was coded almost for 30 min before return of spontaneous circulation. An exhaustive infectious workup including multiple blood cultures, CT chest for identifying possible underlying infection precipitating adrenal crisis was negative. Workup for adrenomegaly leading to adrenal crisis included tuberculin test, adrenal cortex antibody, HIV, RPR, ANA, anticardiolipin antibody, anti-phosphatidylserine antibody, histoplasma antibody and was unrevealing. Patient remained on ventilatory and vasopressor support for next 3 days. In view of poor neurological recovery and per family wishes, care was withdrawn. An autopsy exam was obtained and revealed bilateral adrenal hemorrhage as the cause of adrenomegaly.

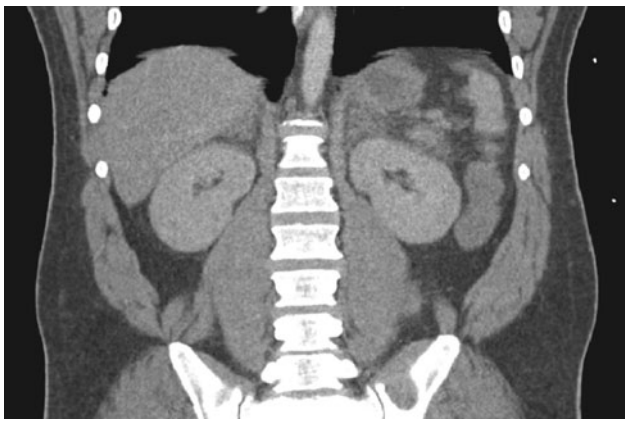

Fig. 1 CT scan (coronal view) showing bilaterally enlarged adrenal gland

Discussion

Adrenal hemorrhage is an uncommon cause of adrenal insufficiency. Risk factors for adrenal hemorrhage include anticoagulant use, thromboembolic disease, antiphospholipid syndrome, trauma, and sepsis [1, 2]. All were

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essentially ruled out as an etiology, making a case for spontaneous idiopathic bilateral adrenal hemorrhage, a rarely reported phenomenon in literature [3].

Typically CT scans can reveal the presence of this uncommon cause of adrenal crisis [3, 4]. However, in our patient, initial CT scan without contrast and later with contrast failed to demonstrate adrenal hemorrhage as a cause of adrenal enlargement. Nonetheless, early recognition and treatment of adrenal insufficiency is of utmost importance [5]. Unfortunately it did not occur for the case in discussion and proved to be fatal.

Conflict of interest All the authors declare that they have no conflict of interest.

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