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ΑΡΧΕΙΑ ΕΛΛΗΝΙΚΗΣ ΙΑΤΡΙΚΗΣ 2020, 37(1):135–136

Surgery Quiz – Case 23

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An 85-year-old female patient with a history of long standing persistent atrial fibrillation treated inter alia with acenocoumarol and ACC/AHA stage B congestive heart failure, presented to the emergency department complaining of constant right lower quadrant pain associated with palpable mass over the preceding 3 days. Direct questioning revealed a history of heavy bout of cough started one day before the onset of pain. The patient had been taking acenocoumarol on regular basis and had no history of abdominal trauma or surgery. At initial presentation, blood pressure was 105/60 mmHg and heart rate 118 beats per minute. Physical examination revealed a right lower quadrant tender non-pulsatile mass. Laboratory studies revealed hemoglobin level of 7.5 g/dL and INR of 4.7. Abdominal computed tomography (CT) is presented below.

What is your diagnosis?
(a) Rupture of iliac artery aneurysm.
(b) Spontaneous rectus sheath hematoma.
(c) Spontaneous urinary bladder rupture.
(d) Rupture of retroperitoneal or ovarian mass.

Comment

Abdominal CT revealed a 12×10×9 cm grade III hematoma originating from the right rectus sheath (fig. 1), extending down to the retroinguinal space, retropubic space and inguinal canal, projecting widely to the minor pelvis and misplacing its organs (fig. 2). This massive right rectus sheath hematoma caused grade II hypovolemic shock and grade II intraabdominal compartment syndrome. The patient treated conservatively with discontinuation of acenocoumarol, vitamin K, crystalloid fluids, transfusion of 3 units of red blood cells, transfusion of 2 units of fresh frozen plasma and tranexamic acid with early response and hemodynamic stabilization. Tinzaparin 4,500 units daily started on day 5 of hospitalization. Repeated CT performed on day 10 revealed stabilization of the hematoma. The patient had an uneventful recovery and discharged for outpatient follow up on day 12 of hospitalization. Acenocoumarol resumed 20 days after discharge due to the moderate to high CHA_2DS_2-VASc stroke risk. At 3 month follow up, clinical examination revealed amelioration of the right lower quadrant palpable mass and CT revealed significant regression of the hematoma.

Rectus sheath hematoma can be classified as: (a) Grade I which includes a hematoma contained in the rectus sheath; (b) grade II which includes a hematoma extending from the rectus sheath down to the transversalis fascia, and (c) grade III which includes a hematoma extending down to the retroinguinal and retropubic space projecting to the minor pelvis and the inguinal canal. Induction treatment is conservative consisting of discontinuation

Figure 1

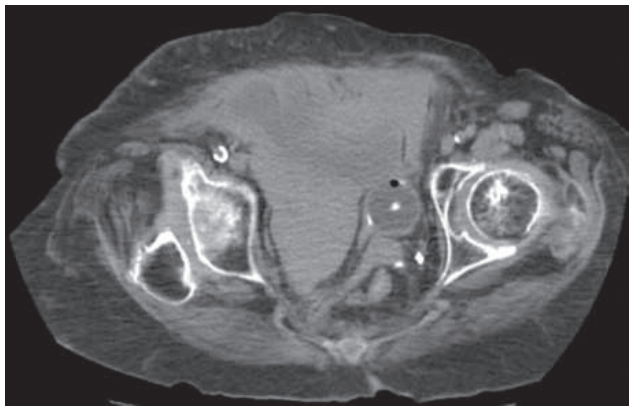

Figure 2

of anticoagulants, transfusion of red blood cells and fresh frozen plasma, antidotes of vitamin K and non-vitamin K anticoagulants and tranexamic acid. Indications for non-conservative treatment include: (a) Initial conservative treatment failure with ongoing hemorrhage and hemodynamic instability, and (b) primary acute or sub-acute abdominal compartment syndrome associated with organ dysfunction for which decompression can be beneficial. Non-conservative treatment includes (a) angiography and embolization of the deep epigastric arteries, and (b) open surgery which includes evacuation of the hematoma and hemostasis. A debatable issue after successful management of these patients is re-introduction of anticoagulants as the possibility of repeated episodes of hematoma should be weighed against the possible thromboembolic complications during discontinuation of anticoagulant therapy.

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