SPONTANOEUS LATERAL ABDOMINAL WALL HEMATOMA AS A COMPLICATION OF STATUS ASTHMATICUS

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ABSTRACT :

Spontaneous lateral abdominal wall hematoma is a rare clinical entity. In this report we present a case of 67-year old male patient with chronic obstructive pulmonary disease who presented to our hospital with the sudden onset of abdominal pain after a status asthmaticus episode and was found to have a lateral abdominal wall hematoma. The patient had no bleeding diathesis and did not use anticoagulants. Abdominal computed tomography revealed a 12x10 cm hematoma in the lateral abdominal wall. Abdominal ultrasound findings were consistent with the tomography results and ultrasound was used thereafter in the follow-up period. After treatment for status asthmaticus and supportive treatment the patient's condition stabilized; no surgical intervention was needed. Based on this patient's presentation, cough can be presumed to be the predisposing factor for the development of spontaneous abdominal wall hematoma. Abdominal CT and ultrasound can be used for the diagnosis and follow-up of lateral abdominal wall hematomas.

KEY WORDS : Spontanoeus Lateral Abdominal Wall Hematoma

CASE REPORT

A 67-year old man was transferred to our hospital complaining of left lateral abdominal pain with swelling and visible ecchymosis in the area. He had experienced severe left abdominal pain after persistent asthmatic episodes. The patient had no history of trauma, anticoagulant therapy, or coagulation disorder. At the time of pain onset, he had had severe dyspnea over the previous 12 hours. He had a 15-year history of chronic obstructive pulmonary disease, treated with inhaled salbutamol and dexamathesone. Six hours following the onset of a particular attack of asthma, the patient noticed a swelling and ecchymosis in the left lumbar region. On admission, the patient was suffering from severe dyspnea with intercostal retractions. His blood pressure was 140/80 mmHg, heart rate 110 beats/minute, and respiratory rate 35/minute. On abdominal exam, a hard, smooth, and tender mass approximately 11 cm in diameter was palpable in his left abdomen. Tenderness, guarding and rebound tenderness was present in the left upper and lower quadrants. Laboratory findings were hematocrit 38%; hemoglobin 12.8 g/dL; platelets 289,000/mm3, white blood count 18,800/mm3; prothrombin time (PT) 25 sec.; activated partial thromboplastin time (aPTT) 30 sec.; and international normalization ratio (INR) 1.1. The ultrasound also displayed a 12x11 cm hematoma in the muscle tissue of the left lateral abdominal wall. A contrast enhanced computed tomography (CT) performed 2 h after his admission showed the expansion of a huge hematoma (12 x 10 cm) and a high-density area in left lateral abdominal wall, thus suggesting extravasation (Fig. 1). For further evaluation and treatment the patient was admitted to the surgical critical care unit. The patient's bronchial asthma treatment was further maintaned by thiotropium 160 mcg/day and a combination of budesonide and formoterol 320 mcg/day. On the second day of hospitalization, the ecchymotic region in the left lumbar region had expanded to twice the initial size and abdominal CT was repeated, but no change in size of the hematoma was seen. Transfusion was not required. Abdominal findings resolved progressively in the following three days and no surgical intervention was needed. The patient was charged on the fifth day of hospitalization.

Discussion

Hematomas of the abdominal wall or retroperitoneal cavity have been reported as a cause of acute abdomen. Spontaneous rectus sheath hematomas caused by a rupture of the inferior epigastric artery are well known[1]. But, hematomas of the lateral abdominal wall are very rare. They may occur spontaneously or result from trauma, trochar placement or femoral artery catheterization. They have resulted from a disruption of the deep circumflex iliac artery, and rupture of the internal oblique muscle[2,4]. The hematoma in our patient occurred due to a left internal oblique muscle rupture.

Certain predisposing factors have been identified for spontaneous abdominal wall hematomas: (i) overcontraction or overstretching of the muscle as a result of coughing, sneezing, straining, twisting, or vomiting; (ii) weakening of the vascular wall or hypertension, atherosclerosis,

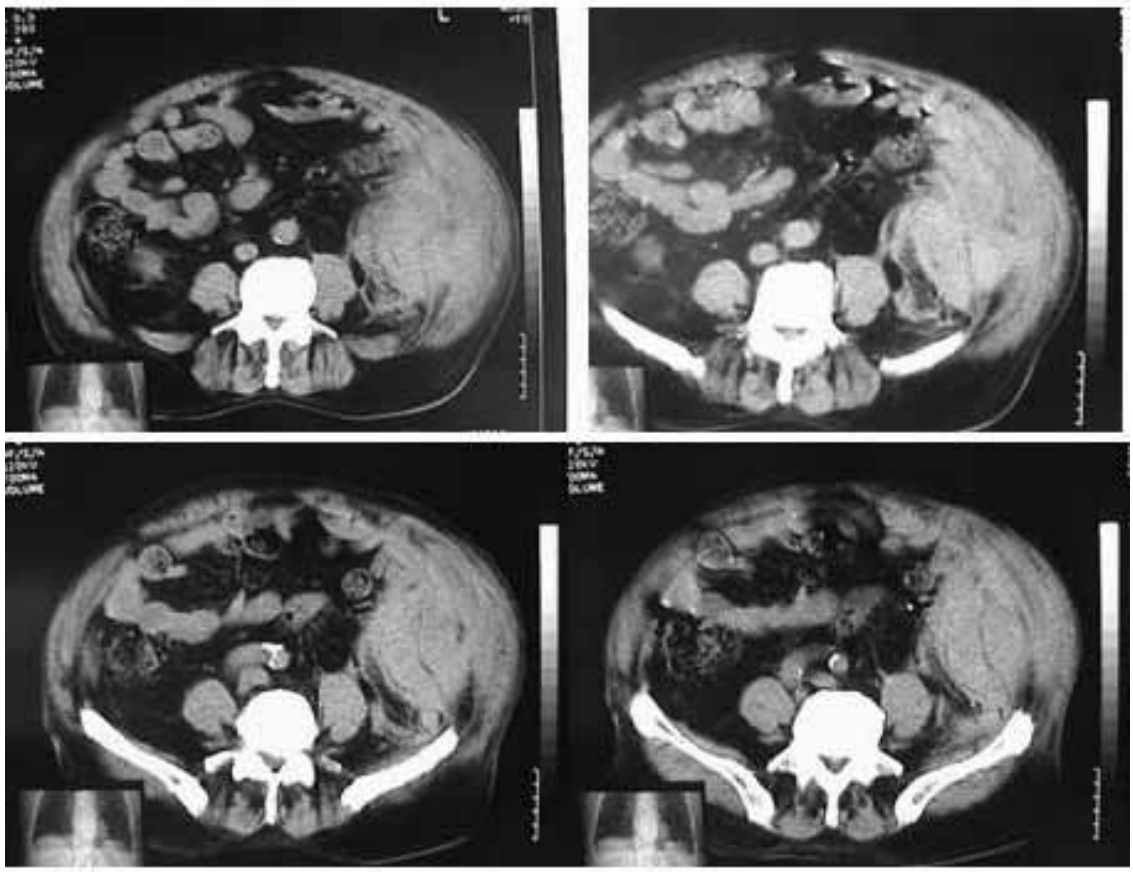

Figure 1. A large hematoma is seen on multiple slices of the contrast-enhanced computed tomography scan.

advanced age, obesity, pregnancy, prior surgery, vasculitis, connective tissue disorders, and inflammatory disorders; (iii) disorders of coagulation and anticoagulant therapy[1]. Our patient did not have a coagulation disorder, anticoagulant therapy, hypertension, vasculitis or atherosclerosis as a predisposing factor. We hypothesize that sudden, forceful, and recurrent cough episodes resulted in rupture of lateral abdominal wall muscles, which caused the spontaneous abdominal wall hematoma. Careful formulation of a differential diagnosis in patients with the sudden onset of abdominal pain and swelling is important in order to prevent unnecessary surgical intervention[1]. Spontaneous lateral abdominal wall hematoma can be misdiagnosed as a mesenteric vascular disorder, dissecting abdominal aortic aneurysm, appendicitis, incarcerated inguinal or incisional hernias, or necrotizing pancreatitis[1].

Abdominal computed tomography and ultrasonography are important tools for making a certain diagnosis. CT will also help locate the ruptured artery and site of active bleeding. Both imaging modalities were utilized in our patient to confirm the diagnosis. Moreover, due to the progression of the ecchymosis a control CT was performed to compare the size of the hematoma. Because no change in the size of the hematoma was seen, we continued the conservative treatment.

The standard treatment for lateral abdominal wall hematomas is supportive[1,4]. Vomiting and repeated coughing should be prevented in order to keep the muscles from continously contracting. In patients with unstable vital signs, angiographic localization of the bleeding and transcatheter embolisation can be instituted. Because our patient was hemodynamically and clinically stable, angiography and other interventional techniques were not performed.

Patients presenting with acute abdominal pain and a palpable mass after straining or strenuous activity may have a spontaneous abdominal wall hematoma. The extent of the hematoma can be visualized with CT and ultrasonography. In hemodynamically stable patients, conservative measures as well as treatment of the underlying disease should be undertaken.

KAYNAKLAR

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