Case study

Cough-Induced Abdominal pain in a 67-Year-old Female

Abstract

We report herein a case of rectus sheath hematoma following a cough paroxysm treated as surgical intervention. Rectus sheath hematoma (RSH) is a rare clinical condition of acute abdomen and often misdiagnosed in the emergency department. A 67-year-old woman presented to the emergency department with complaint of 2-day history of abdominal pain localized in left upper region. The pain was persistent. The patient reported that her pain worsened with coughing and certain movements.Abdominal muscle forceful contraction during coughing causes direct tear of the rectus muscle or rupture of epigastric arteries leading to formation of RSH. RSH is an accumulation of blood in the anterior rectus abdominis muscle.

Keywords: abdominis muscle, Rectus sheath hematoma, abdominal medication, cough paroxysm

Introduction:

Rectus sheath hematoma (RSH) is a rare clinical condition of acute abdomen and often misdiagnosed in the emergency department. It is a well-documented complication of direct abdominal trauma, physical activity, abdominal medication injection, recent surgery, anticoagulant therapy, antiplatelet therapy, pregnancy or increased intra-abdominal pressure from coughing(1,2,3). We report herein a case of rectus sheath hematoma following a cough paroxysm treated as surgical intervention.

Case Presentation

A 67-year-old woman presented to the emergency department with complaint of 2-day history of abdominal pain localized in left upper region. The pain waspersistent. The patient reported that her pain worsened with coughing and certain movements. She suffered a severe cough for 5 days. Shedenied using anticoagulation agents and trauma. She had no history of hypertension, diabetes mellitus, malignancy or prior surgency. On arrival, she was hemodynamically stable. Her blood pressure was 131/80 mmHg, with a heart rate of 99 beats/minute and a respiratory rate of 18 breaths/minute. She was afebrile.On physical examination, the lung auscultation revealed the coarse breath sounds with fine crackles in the both lower lungs zones. Her abdominal examination revealed normal skin color, diffuse abdominal fullness and a palpable, firm, nonmobile and tender more marked over the leftupper abdominal region with no guarding or rebound tenderness. Complete blood cell count and biochemistry were all reported in normal range. The patient underwent chest-abdomen-pelvis computed tomography (CT) scan. CT showed widespread areas of patchy consolidation in both lungs (Figure 1) and rectus sheath hematoma that was measured to be approximately 5x4.5x2.5cm in volume (Figure 2, arrow).

The patient was admitted and given intravenous antibiotics for pneumonia and analgesics for rectus sheath hematoma.Tranexamic acid was started intravenously. Over the next few days, she improved slowly but continued to complain of persistent left upper abdomen pain associated with fever and postprandial vomiting. She underwent a Tumescent technique for the hematoma evacuated. The patient recovered with surgical management and intravenous antibiotics. She had an uneventful postoperative recovery and was discharged 11 days later.

Discussion:

RSHis a relatively uncommon problem encountered in the emergency department and often clinically misdiagnosed cause of abdominal pain.The diagnosis is challenging. RHS is the result of bleeding into the rectus sheath from damage to the epigastric arteries or from a direct tear of the rectus muscles. Delayed diagnosis of rectus sheath hematoma is still associated significant and morbidity and mortality (4). The diagnosis may be suspected based upon clinical history,presentation, physical examination and radiologic findings.Trauma and anti-thrombotic medication are the most common risk factors. The other predisposing factors of RSH include vomiting, severe cough and pregnancy (5). Abdominal muscle forceful contraction during coughing causes direct tear of the rectus muscle or rupture of epigastric arteries leading to formation of RSH. RSH is an accumulation of blood in the anterior rectus abdominis muscle. The initial evaluation of patients with clinical signs and symptoms of RSH should include abdomen examination. Ultrasound is usually the initial diagnostic test, but CT might be necessary to determine the origin and source of a rectus sheath hematoma.Secondary infection of hematoma should be considered if it is increasing in size or becoming more painful. The findings of clinical instability, persistent abdominal pain are concerning for intra-abdominal sepsis, mandate immediate surgical intervention.

Conclusion:

RHS should be keep in the mind as a patient having a severe cough presents with abdominal pain. Sudden abdominal pain together with a painful abdominal mass must alert emergency physicians about the diagnosis of abdominal hematoma. Thorough history taking, abdomen palpable mass on abdominal wall, diagnostic test of ultrasonography and CT are essential for the diagnosis of the condition.

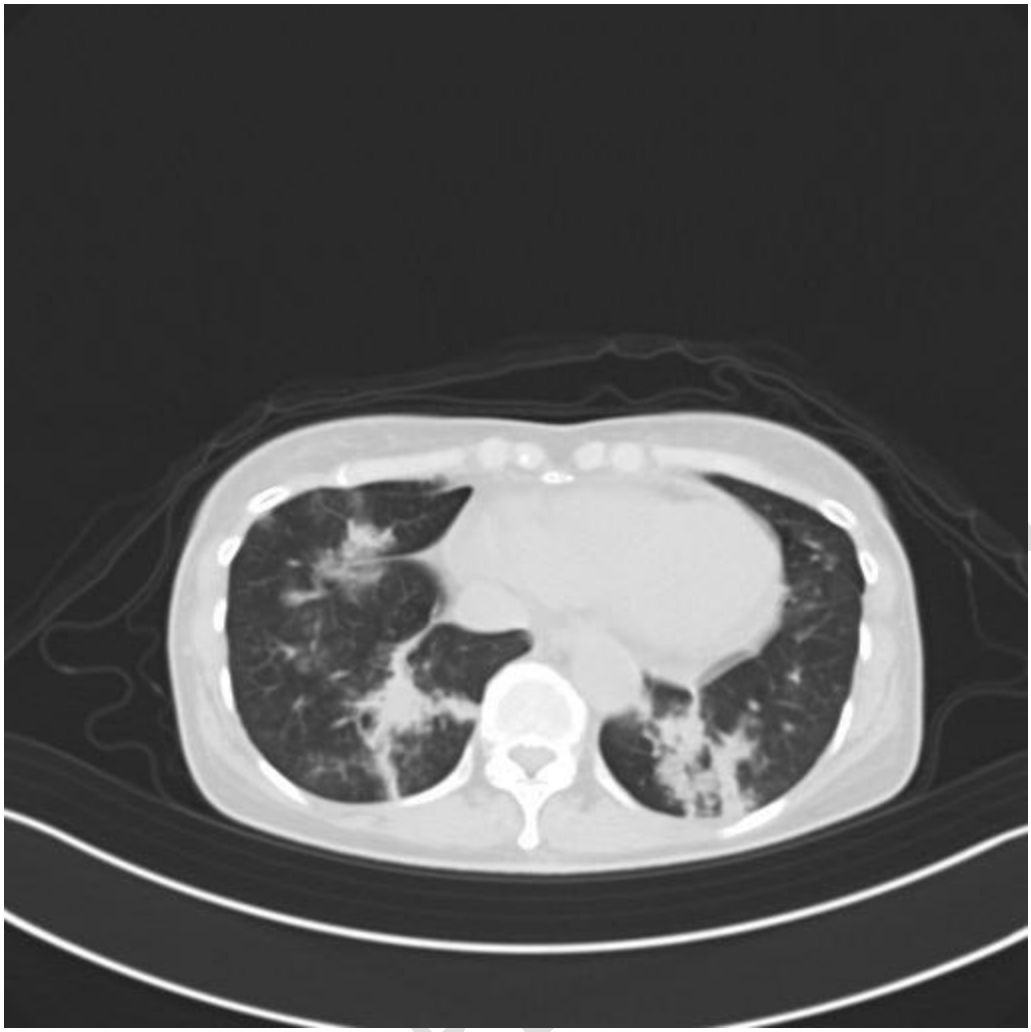

Figure 1: Chest CT revealed bronchiectasis in the both lungs.

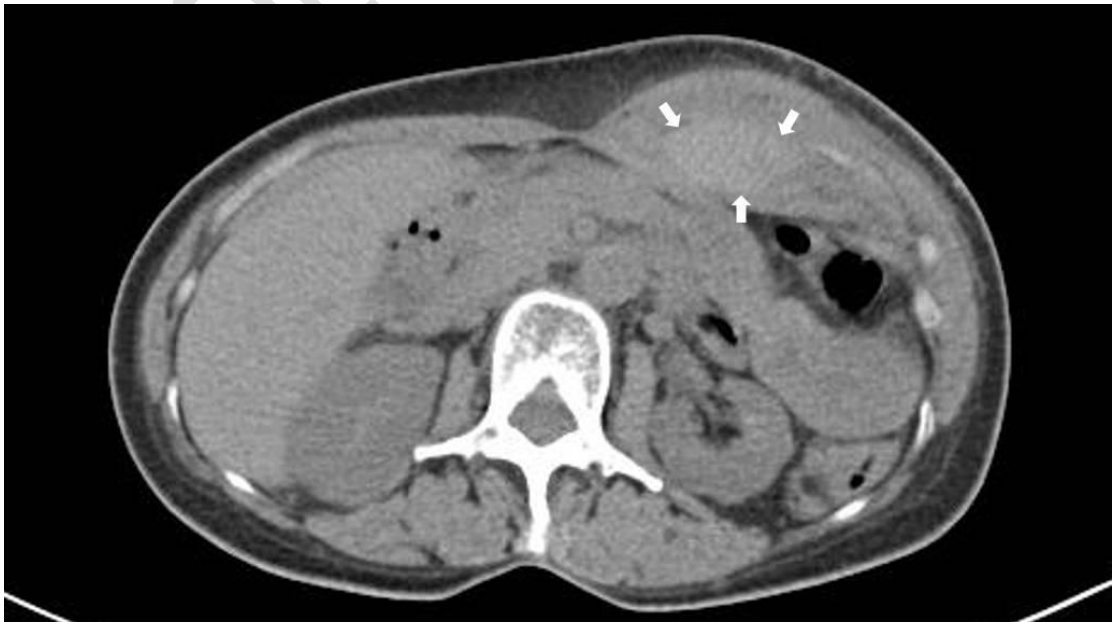

Figure 2: Axial view of patient's abdomencomputed tomography revealed a rectus hematoma.

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