

Case Report

Cough – A Curious Case

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Abstract

Cough, as a symptom by default gets the focus of a physician towards the chest ruling out the causes could be of the same. However an incessant cough causing life threatening extra pulmonary complications is a rarity. We present a case of an elderly female who presented with a cough with expectoration but ended up requiring strict hemodynamic monitoring due to a rectus sheath hematoma.

Keywords: Cough, rectus sheath hematoma (RSH), computed tomography (CT), hemodynamics.

Introduction:

Rectus sheath hematoma (RSH) is one of the uncommon causes of abdominal pain. It is defined as a collection of blood in the sheath of the rectus abdominis muscle. The cause for this could be a tear of the epigastric vessels and/or branches or trauma to the abdomen. Clinical examination can cause a misdiagnosis of an abnormal growth, inflammatory bowel disease or acute abdomen.¹ Most common complaints of the patients on presentation were abdominal pain and/or palpable mass of the abdominal wall. Risk factors of RSH are sex (female), elderly, cough, abdominal trauma, anticoagulation agents, deranged coagulation profile etc.² Computed tomography (CT) scan of the abdomen and pelvis is a reliable diagnostic tool for confirmation of diagnosis.^{1,2} The treatment of choice is managing conservatively i.e. ice packs, analgesics, bed rest, intravenous fluids +/- blood transfusion depending on size of hematoma and hemoglobin (Hb) of the patient.

Case Report

60 year old female, a known case of Diabetes Mellitus, Hypertension, Chronic Obstructive Pulmonary Disease, Ischemic Heart Disease and Hypothyroidism was transferred from another private hospital with history of breathlessness, cough with production of phlegm, fever on and off, increased

frequency and urge to pass urine with a swollen abdomen, hyponatremia and loss of appetite since 7-8 days.

On arrival to the hospital, patient's Hb was around 9 gm/dl with a blood pressure of 110/90 mm of Hg and a pulse rate of 99/min. Next day she became unstable with a hypotension. Immediate resuscitation was started. On examination, a painful, firm, abdominal mass was felt on the abdominal wall. An immediate CT scan of the abdomen and pelvis was done along with ongoing resuscitation which revealed an anterior abdominal wall rectus sheath hematoma (Figure 1). Her basic coagulation tests were normal with no history of receiving any low molecular weight heparin (LMWH). The development of this hematoma was related to incessant cough which resulted in shearing forces disrupting the inferior epigastric vessels at the lower end of the rectus sheath.

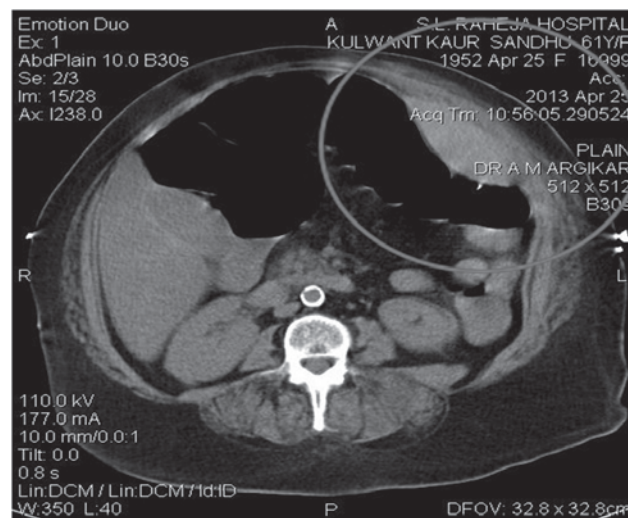


Figure : 1 CT Abdomen showing rectus sheath hematoma in anterior abdominal wall (Encircling mark)

Blood transfusions were initiated as the Hb had dropped to 7 gm/dl. The interventional radiology team was placed on standby. Unfortunately she developed an anterior wall ST elevation myocardial infarction (STEMI) the same day with the ejection fraction dropping to 25%. In view of the large life threatening RSH, it was not possible to anticoagulate /thrombolyse or give antiplatelets to this patient and further management was purely based on hemodynamic optimization. She progressively became breathless with manifestations suggestive of left ventricular failure. She was

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intubated and placed on mechanical ventilator owing to unstable hemodynamics, marked respiratory distress and inability to treat the myocardial infarction by standard means. Extensive monitoring equipment including a cardiac output monitor was used.

Fluid challenges/boluses and inotropes were managed after correlating stroke volume variation, cardiac output and stroke volume and central venous pressure. Three days later, patient was extubated and three days post extubation patient was transferred to the general ward uneventfully.

Discussion

This case explains the dangers of a seemingly innocuous cough which resulted in near death of the patient due to the exsanguination caused by the RSH probably triggering the myocardial infarction. Diagnosis of rectus sheath hematoma is challenging since only 50% of patients will have a visible hematoma at the time of presentation.³ As a result, RSHs are often confused with other causes of acute abdomen such as appendicitis, cholecystitis, incarcerated inguinal hernia, torsion of ovarian cyst, or acute pancreatitis. Nonspecific nature of symptoms combined with the low incidence (1-2%)^{4,5} of the disorder lead to difficulty in considering this diagnosis. This case also highlights the importance of optimizing hemodynamics in the right patient with the right monitoring.

Conclusion

Rectus sheath hematoma should be considered as a differential diagnosis in a patient presenting with an acute abdomen to prevent misdiagnoses and unnecessary laparotomies. Although they are very rarely fatal, we should keep in mind the risk factors which includes cough.² CT scan helps in clinching the diagnosis. Conservative management is the mainstay treatment although it can modify depending on severity of the hematoma.

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