An unusual presentation of ruptured abdominal aorta aneurysm

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Data Collection B
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Data Interpretation D
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Patient: Female, 65
Final Diagnosis: Ruptured abdominal aorta aneurysm
Symptoms: —
Medication: —
Clinical Procedure: After surgery the patient was discharged without sequelae
Specialty: Surgery

Objective: Unusual clinical course
Background: Rupture of an abdominal aortic aneurysm is the most frightening and potentially life threatening complication of an abdominal aorta aneurysm (AAA). Patients present with atypical symptoms such as abdominal or flank pain, gastrointestinal hemorrhage, or shock.
Case Report: A 65-year-old woman presented to our emergency department with gradually increasing left flank pain for 4–5 days. Her laboratory, radiologic, and physical examination revealed no significant pathology, so she was discharged, but 3 days later she was readmitted because her symptoms returned. Further research revealed a ruptured AAA and the patient was hospitalized for surgical intervention.
Conclusions: Emergency physicians should keep in mind that AAA and its rupture can present with a wide range of symptoms that appear to be simple.

Key words: flank pain • rupture • aneurysm

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Background

An abdominal aortic aneurysm (AAA) is an enlargement of the aorta greater than or equal to 3.5 cm. Rupture of an abdominal aortic aneurysm is the most frightening and potentially life-threatening complication of AAA [1]. Signs and symptoms of AAA and its rupture can be confounding. Diagnose is based on suspicion of this disease. We report a case of ruptured AAA presented with recurring flank pain.

Case Report

A 65-year-old woman presented to our emergency department with gradually increasing left flank pain for 4–5 days. Her laboratory, radiologic, and physical examination results revealed no significant pathology, so she discharged, but 3 days later she was readmitted because her symptoms returned.

She had a medical history of hypertension and diabetes mellitus. On admission, right and left arm blood pressures were 180/100 and 165/95 mmHg, respectively, heart rate was 115/min and regular, and body temperature was 37.2°C. In her physical examination she was alert, cooperative, oriented, and there was no neurological deficit. Radial and femoral pulses were present and symmetric bilaterally. First and second heart sounds were appreciated and there were no extra sounds or murmurs. Her abdominal examination revealed diffuse abdominal tenderness to deep palpation and left costo-vertebral angle tenderness. Results of other system examinations were normal and there were no significant laboratory findings. We decided to perform abdominal ultrasonography, which revealed a 7-cm aortic aneurysm dilatation before aortic bifurcation. Then we planned abdominal CT with contrast and it confirmed an aortic aneurysm extending from infrarenal 3.8 cm distance to the aortic bifurcation, extravasation from left posterolateral wall of the aorta into the retroperitoneal hematoma (Figure 1). She was diagnosed with AAA rupture. We administered 5 mg metoprolol, 5 units of red blood, 3 units of whole blood, and 6 units of fresh frozen plasma. The patient consented to cardio-vascular surgery and was hospitalized for an endovascular stent-graft operation.

Discussion

AAA causes a weakness in the wall of the aorta that can be present at birth or can develop as the result of disease or injury such as hypertension, smoking, atherosclerotic disease, peripheral vascular disease, stroke, diabetes, or family history of AAA [2]. Most aortic aneurysms are found when a person undergoes a medical test or procedure for some other reason and cause no symptoms until they become very large or rupture.

Figure 1. Abdominal computed tomography (CT) scan with IV contrast demonstrates an aortic aneurysm extending from infrarenal 3.8 cm distance to the aortic bifurcation and leaking from left posterolateral wall of the aorta into the retroperitoneal hematoma.

There are no typical symptoms specific to an abdominal aortic aneurysm or rupture [3]. This means that they may also present with a variety of symptoms that can mimic other primary diagnoses: GI bleeding; aortoenteric fistulas; pain in atypical presentations such as flank, back, groin, abdomen, or hip, suggesting a renal, hepatobiliary or pancreatic disorder; syncope due to rapid blood loss and a lack of cerebral perfusion. These symptoms may confuse the diagnostic process of the emergency physician. Sudden death most commonly occurs from intra-peritoneal rupture of the aneurysm. Signs of acute rupture include periumbilical ecchymosis (Cullen sign) or flank ecchymosis (Grey-Turner sign). Retroperitoneal blood may also extend to the perineum or groin, with scrotal or vulvar hematomas or inguinal masses evident on physical examination [4], but, except for flank and abdominal pain, these were not present in our patient.

Flank pain is a very common symptom that patients present to emergency departments and is usually considered to be renal, musculoskeletal, or genitourinary in origin, but it can be due to AAA if rupture occurs, the mortality rate is 78–94% [5]. Our patient presented to our emergency department with flank pain beginning 3 days before. Her laboratory, radiologic, and physical examination results revealed no significant pathology, so she discharged. However, she returned to our emergency department because her symptoms recurred. Further research revealed an AAA rupture and the patient was hospitalized for surgical intervention.

Conclusions

Emergency physicians should keep in mind that AAA and its rupture can present with a wide range of symptoms that appear to be simple.

References:

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