

Editorial

Abdominal Pain in the Emergency Department: We Must Not Forget the Arterial Aneurysms

Diaconu C*University of Medicine and Pharmacy "Carol Davila",
Clinical Emergency Hospital of Bucharest, Romania***Corresponding author:** Camelia Diaconu, University
of Medicine and Pharmacy "Carol Davila", Clinical
Emergency Hospital of Bucharest, Romania**Received:** April 17, 2016; **Accepted:** April 18, 2016;**Published:** April 20, 2016**Editorial**

Abdominal pain is a common complaint in patients addressed to emergency departments. Evaluation of patients presenting for abdominal pain is a real challenge for emergency physicians, since the cause is not always easy to identify. The etiology of abdominal pain is very variable, depending on a multitude of factors, such as age, known comorbidities, previous medical or surgical treatments etc. An accurate and quick diagnosis of abdominal pain in emergency departments requires availability of advanced imaging diagnostic techniques, such as computed tomography. Diagnosis is more difficult in very young or very elderly patients. Studies demonstrated that the rate of hospitalization in elderly patients presenting to emergency departments with abdominal pain is at least 50% and 30-40% had surgery for the underlying condition. The same studies have showed that approximately 40% of elderly patients with abdominal pain were misdiagnosed, contributing to an overall mortality rate of approximately 10%.

Vascular diseases, especially aneurysms, are an important cause of abdominal pain in elderly patients. Abdominal aortic aneurysms are relatively common and potentially life-threatening in elderly. An aneurysm is defined as a local dilatation of an artery, with at least 50% increase of the normal diameter. The diagnosis of an abdominal aortic aneurysm can be made if the aortic diameter is greater than 3cm. The most common cause of an abdominal aortic aneurysm is the degeneration of the media of arterial wall, with a slow dilatation of the aorta; more rarely, the cause may be an infection, arteritis, trauma, connective tissue disorders, arterial hypertension, etc. Patients with relatives diagnosed with aortic aneurysms have increased risk. The majority of abdominal aortic aneurysms are asymptomatic, many of them being diagnosed incidentally on diagnostic imaging studies done for other indications. Advanced age (over 65 years old) is a risk factor for aortic aneurysms, especially if the patient has also atherosclerotic peripheral artery disease [1-5].

Abdominal aortic aneurysms are usually asymptomatic, until they increase or rupture. Some of the patients may present nonspecific,

mild abdominal pain, symptoms of local compression (early satiety, nausea, vomiting, venous thrombosis, urinary symptoms etc). If the aneurysm erodes the adjacent vertebrae, back pain may occur. If thrombosis of the aneurysm occurs, with peripheral emboli in lower legs, claudication or signs of acute peripheral ischemia may appear. At physical exam, the presence of a pulsatile mass in the abdomen must rise the suspicion of an abdominal aortic aneurysm. The ruptured aortic aneurysm is a major emergency; it may present with intense abdominal pain or back pain in a patient with pulsatile abdominal mass. Other possible signs are syncope, groin pain, arterial hypotension or even frank shock, with cyanosis, altered mental status, tachycardia, and hypotension. The majority of patients with ruptured abdominal aortic aneurysm die before arriving to hospital. The diagnosis of rapidly expanding or ruptured abdominal aortic aneurysm should be taken into consideration in all patients older than 50 years which present with abdominal, back or flank pain of sudden onset, especially if associated with syncope or signs of hemorrhagic shock. The differential diagnosis must be done with acute appendicitis, diverticulitis, acute gastritis, cystitis in women, cholelithiasis, pancreatitis, myocardial infarction, large bowel obstruction, peptic ulcer disease etc.

Usually, laboratory exams are not very useful for the diagnosis of abdominal aortic aneurysms. Imaging may establish the diagnosis. Ultrasonography is the best screening method, but computed tomography, magnetic resonance imaging and angiography are most of the time necessary for the correct assessment of the aorta, in order to refer to the vascular surgeon.

References

1. Guirgis-Blake JM, Beil TL, Senger CA, Whitlock EP. Ultrasonography screening for abdominal aortic aneurysms: a systematic evidence review for the U.S. Preventive Services Task Force. *Ann Intern Med.* 2014; 160: 321-329.
2. Von Allmen RS, Powell JT. The management of ruptured abdominal aortic aneurysms: screening for abdominal aortic aneurysm and incidence of rupture. *J Cardiovasc Surg (Torino).* 2012; 53: 69-76.
3. Wassef M, Baxter BT, Chisholm RL, Dalman RL, Fillinger MF, Heinecke J, et al. Pathogenesis of abdominal aortic aneurysms: a multidisciplinary research program supported by the National Heart, Lung, and Blood Institute. *J Vasc Surg.* 2001; 34: 730-738.
4. Daly KJ, Torella F, Ashleigh R, McCollum CN. Screening, diagnosis and advances in aortic aneurysm surgery. *Gerontology.* 2004; 50: 349-359.
5. Hustey FM, Meldon SW, Banet GA, Gerson LW, Blanda M, Lewis LM. The use of abdominal computed tomography in older ED patients with acute abdominal pain. *Am J Emerg Med.* 2005; 23: 259-265.