

## **ABDOMINAL AORTIC ANEURYSM RUPTURE**

Nuray Kılıç<sup>1\*</sup>, Fulya Köse<sup>2</sup>, Dilek Atik<sup>2</sup>

<sup>1</sup>Department of Emergency Medicine Manisa Alasehir Hospital, Manisa

<sup>2</sup>Department of Emergency Medicine, Karamanoğlu Mehmetbey University, Karaman

\*Corresponding author

### **ABSTRACT**

An increase in the diameter of the vessel wall more than one and a half times is called an aneurysm. Abdominal aortic aneurysm is defined as aortic diameter  $\geq 3$  cm and repair is considered when  $\geq 5$  cm. In the United States, the most common cause of death in middle-aged individuals is complications from abdominal aortic aneurysm (1). Today, aneurysms are common in our country due to increasing risk factors. In this case, we aimed to describe a ruptured abdominal aortic aneurysm in a 64-year-old male patient who applied to the emergency department with the complaint of abdominal pain.

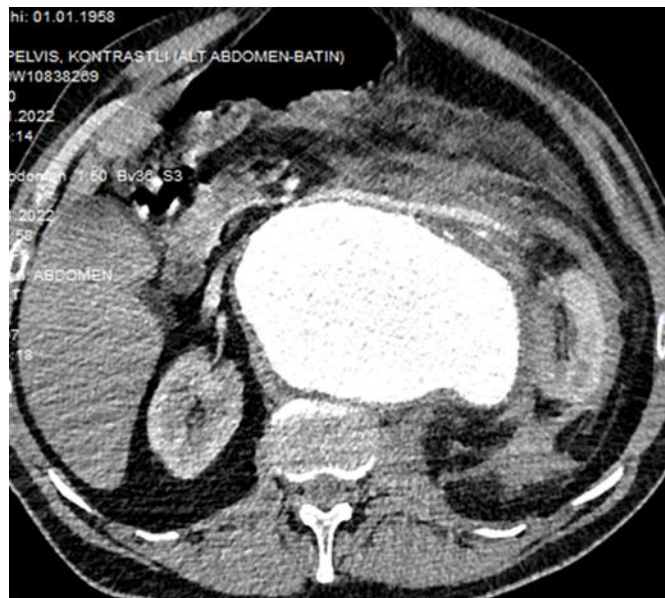
**Keywords:** Abdominal aortic aneurysm, Abdominal pain, Emergency department.

## INTRODUCTION

In the United States, the most common cause of death in middle-aged individuals is complications from abdominal aortic aneurysm (1). The abdominal aorta is the segment of the aorta that starts from the hiatus (12th thoracic vertebra) and extends to the distal iliac bifurcation (4th lumbar vertebra)(2). Aneurysms occur with the weakening and enlargement of the vessel wall over time due to high pressure and different external factors. Aneurysms are most common in the infrarenal abdominal aorta. Abdominal pain or back pain is one of the most common symptoms of abdominal aortic rupture or aneurysm. The pain is severe and has a sudden onset. The classic triad of ruptured abdominal aortic aneurysm; abdominal pain, pulsatile abdominal mass and hypotension(3). Ruptured abdominal aortic aneurysm has a high mortality rate and is one of the most important emergencies in cardiovascular surgery(4). Emergency physicians are the first to encounter this situation. Patients who cannot be treated promptly and diagnosed quickly are mostly lost due to hemorrhagic shock.

## CASE REPORT

The patient with known abdominal aortic aneurysm was brought to our emergency department by the 112 ambulance with the complaints of sudden onset of abdominal pain and cold sweating. The patient's vital signs were recorded as right arm blood pressure 90/60, left arm blood pressure 80/50, heart rate 105, room air saturation 96, fever 36.7. On physical examination of the patient, there was widespread tenderness in the abdomen in all quadrants. There was EKG sinus tachycardia. The patient was conscious, oriented and cooperative. According to the information obtained from the patient himself, surgery was recommended, but he did not accept it due to financial conditions. Vascular access was established in both arms of the patient. The patient, who was evaluated as unstable, was catheterized into the bladder and monitored. Hemogram, extensive biochemistry, blood gas, coagulation and blood group panel were requested. ( Figure 1). In the laboratory examinations of the patient, it was observed that WBC 13 K/uL, Hgb 11 g/dl, PLT 180 K/uL, CRP 63 mg/l, BUN 26, Creatinine 1 mg/dl, PH 7, 45. CT-angio was planned for the patient with a history of aneurysm with a defibrillator device and emergency bag for definitive diagnosis, accompanied by a doctor. In the CT-angiography performed, it was observed by the emergency medicine specialist that there was a fusiform aneurysmatic dilatation reaching 10 cm in diameter at the infrarenal level in the abdominal aorta, and there were reticular - linear density increases and fluid values around the aneurysm and in the left pararenal area. Since these findings were consistent with aneurysm rupture, the patient was urgently referred to a cardiovascular surgery center.



**Figure 1.** Aneurysmatic dilation and fluid in the left pararenal space

## DISCUSSION

Abdominal aortic aneurysm can be encountered clinically in our emergency services with symptoms and signs such as abdominal pain, palpable pulsatile mass in the abdomen, nausea, vomiting, weight loss, hematemesis, melena, jaundice. Ruptured aneurysms may present with a poor general condition and a shock picture. The classic symptoms of abdominal aortic aneurysm rupture are sudden onset of severe abdominal and flank pain, a pulsatile abdominal mass, and hypovolemic shock. However, only one-third of patients show all these symptoms (5).

Diagnosis is made by imaging methods after anamnesis and physical examination. In imaging, examinations such as direct abdominal X-ray, ultrasonography, computed tomography angiography (CTA), MR-Angiography are used. Despite all this, CTA is the most commonly used and most preferred imaging method. Surgical mortality in ruptured AAA patients is higher than in those undergoing elective surgery (4).

Patients in such situations apply to our first emergency services and emergency physicians should be prepared for these situations. Correct decision, fast and treatment management saves lives.

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