

# Pure lower extremity pain as a rare presentation of aortoiliac aneurysm

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## Abstract

Aortic aneurysms (i.e., thoracic, thoracoabdominal, and abdominal aneurysms) represent a life-threatening condition. Unfortunately, most patients with aortic aneurysms do not have warning signs until they rupture. An 83-year-old man came to the emergency department of Razi hospital in Rasht, following acute-onset bilateral lower extremity pain with a pain score of 6/10. According to the performed examinations and confirmation of the CT findings, the patient was a candidate for open surgery to repair the aortic aneurysm. Aortic aneurysms may cause some neurological complications in the lower extremities. In most cases, extremity pain exists besides the complications including different levels of paresthesia, paraparesis, or paraplegia, but a pure pain in lower extremities without any other neurological signs and symptoms is rare and it needs special attention to be diagnosed.

**Keywords:** Endovascular treatment, Lower extremity, Aortoiliac aneurysm

## Introduction

Aortic aneurysms (i.e., thoracic, thoracoabdominal, and abdominal aneurysms) represent a life-threatening condition. If not treated, they are associated with a risk of rupture ranging between 46% and 74%, with a 5-year survival rate of 9% to 13%. Potential ruptures are mainly related to aneurysm dimensions. The risk increases substantially with size, so that, for example, the annual rupture risk in aneurysms >6 cm in diameter rises to 14% [1].

Unfortunately, most patients with aortic aneurysms do not have warning signs until they rupture; In patients who come, we have symptoms such as abdominal pain and back pain [2].

However, sometimes the presentation of an aortic aneurysm is very unusual and can manifest itself with symptoms such as lower limb paresis, which can lead to misalignment of these patients if the possible diagnosis of aortic aneurysm is not considered and not properly examined [3, 4].

## Case presentation

An 83-year-old man came to the emergency department of Razi hospital in Rasht, following acute-onset bilateral lower extremity pain with a pain score of 6/10. The patient did not mention any fever, nausea or vomiting.

His past medical history was significant for diabetic mellitus, hypertension, benign prostatic hyperplasia (BPH) two episodes of seizure happened three and one year ago.

The patient had no allergy history, and was taking sodium valproate (depakin) daily due to prevent seizure attacks and tamsulosin daily for management of BPH.

The patient has no history of smoking, alcohol drinking and drug abuse.

Patient was steady and ill in appearance and vital signs include: Blood pressure of 150/80 mmHg, pulse of 76 beats per minute, respiratory rate of 18 breaths



Figure 1. Pelvic position of AAA. (Anteroposterior diameter of 64 mm and transverse diameter of 61 mm)

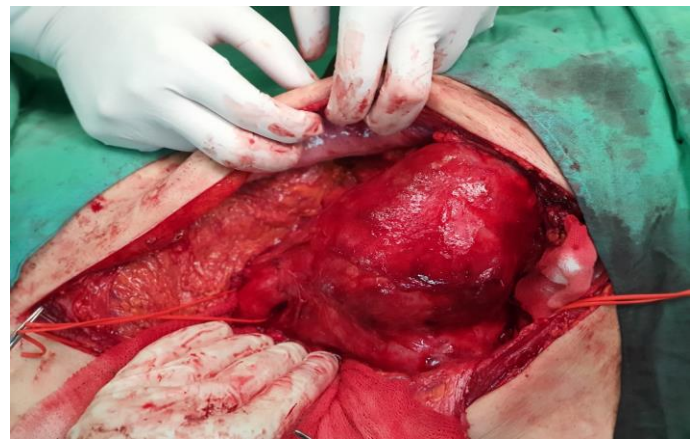


Figure 2. Intraoperative findings

per minute, temperature of 36.9°C and pulse oximetry of 98%.

On physical exam the patient's sclera was pale and pupils were reactive to light, round, equal, and eyes have proper extra-ocular movements and sclera was not icteric. There was no elevated jugular venous pressure (JVP) and lymphadenopathy. Pulmonary, cardiovascular examinations were normal. Abdomen was asymmetrically distended in looking, normoacative in auscultation and tympanic in percussion. A beating mass was palpable in hypogastric area with clear margins. The extremities were not edematous or cyanotic, proximal and distal pulses were symmetric and 2+ in both upper and lower limbs, and there was no popliteal mass detected. The muscle force was 5/5 in both upper and lower extremities. The patient was oriented to time, people and place. He was fully able to follow commands and appropriately talk. Glasgow coma scale was reported as 15.

An abdominal and pelvic CT was performed with IV contrast and the report revealed no abnormalities in liver, gallbladder, intrahepatic and extrahepatic bile ducts, Spleen, pancreas and kidneys. A descending abdominal aortic aneurysm from umbilical area to bifurcation of aorta in distal was seen with a diameter of 64mm and a possible progression of aneurysm to iliac arteries reported (Figures 1 and 2).

According to the performed examinations and confirmation of the CT findings, the patient was a candidate for open surgery to repair the aortic aneurysm. During surgery, we noticed the pressure of the aortic aneurysm on the patient's nerve roots behind the aneurysm (Figure 2).

## Discussion

Although aortic aneurysm is not a common disease (5-10 per 100,000 person-years), it can lead to complications and mortality if left undiagnosed [1]. Unfortunately, in the most of the cases aortic aneurysm has no signs and symptoms and some random assessments in patients lead to accidental diagnosis of aortic aneurysm or it remains undiagnosed until it turns to a ruptured aortic aneurysm with complications [5]. Younger patients with abdominal aortic aneurysm (AAA) are more likely to have symptoms [2] and common symptoms in AAA are pain that typically located in the abdomen, but it can be described as a pelvic, flank or back pain [3], and lower extremity ischemia resulted from thromboembolism or atherosclerotic debris from the aneurysm[4].

In rare cases signs and symptoms of aortic aneurysm may be atypical and misleading including neurological signs and symptoms. [6 and7] In this case the only warning symptom was a bilateral lower extremity pain with the normal muscle force and sensation neurologic tests of extremities and no related past medical history.

A case of transient paraparesis as complication of an acute abdominal aortic aneurysm rupture, presumably due to occlusion of blood flow to conus medullaris, has been described [3] Some cases have resulted as complications of open as also endovascular aneurysmorrhaphy [6].

Spinal cord ischemia secondary to an aortic aneurysm is an unusual situation. The typical clinical features entail urinary incontinence, lower limb motor deficit, and patchy sensory loss with a sensory level of T10-12. More-over, because of its clinical presentation, it may be confused with other spinal

involvement syndromes, such as Guillain-Barré syndrome [7].

Neurologic signs caused by spinal cord ischemia often are manifested during a longer time, and depending on infarct topography, the patients suffer from different types of transverse spinal cord. In our case, because of the clinical presentation, the affected area of the medulla spinalis seems to be at the level of the conus medullaris, which involves vascular territories of the anterior spinal artery and posterior spinal artery [6].

As mentioned above, aortic aneurysms may cause some neurological complications in the lower extremities. In most cases, extremity pain exists besides the complications including different levels of paresthesia, paraparesis, or paraplegia, but a pure pain in lower extremities without any other neurological signs and symptoms is rare and it needs special attention to be diagnosed.

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