







CASUISTIC PAPER

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An iliac artery aneurysm

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ABSTRACT

Introduction. Isolated common iliac artery aneurysms (CIAs) are rare. The rarer are rupture of the common iliac artery. We can treat them surgically: classic or endovascular. Open surgery has a main role in the management of aneurysms not suitable for repair by endovascular techniques.

Aim. The aim of the study is to present the possibility of occurrence of such a disease at a young age, to indicate non-characteristic symptoms that may predict the above-mentioned disease entity at the level of a primary care physician or SOR. Review of medical publications from 2000-2019 regarding guidelines or methods of conduct in that cases.

Description of the case. A patient 39 years old, admitted to the Department of Vascular Surgery, in an interview: about 15 years ago severely beaten, as a result of injuries total loss of hearing, memory and basic skills such as: speech, writing, reading, hospitalized over 6 months.

Conclusion. Good rehabilitation and patient persistence restored cognitive skills. Advances in surgical has lowered the mortality and morbidity rates even in patients.

Keywords. arteriography, iliac artery aneurysms, intravascular therapy, Stent-Graft

Introduction

A number of complications are directly related to the endovascular treatment method for common iliac artery aneurysms.¹⁻³ In some cases, due to the extent of the aneurysm, we take into account that it may be necessary to extend the covered stent or leg of the Stent-Graft to the external iliac artery (EIA), in order to avoid type I leakage, it is necessary to close the internal iliac artery (IIA)

by means of interventional covering her ostium or intra-operative embolization.⁴ IIA obstruction is often associated with gluteal claudication and erectile dysfunction - up to 55% and 46% of patients, respectively.⁵⁻⁸ In rare cases, it may lead to gluteal necrosis, spinal cord ischemia or colon ischemia. Intra-operative iodine contrast may lead to post-contrast nephropathy. The frequency of this complication is estimated at 1.2-1.6% of patients who received

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intravenous or intra-arterial contrast agent. The tortuous course of the iliac arteries can hinder or even prevent the correct positioning of the vascular prosthesis, and as a result of unfavorable anatomical conditions it may be enough to perforate or detach the vessel.⁹⁻¹¹ Not without significance is the fact that endovascular procedures require highly specialized medical equipment and qualified medical staff, which may limit access to such procedures. In some cases, the anatomical structure of the iliac arteries does not allow the use of intravascular therapy or significantly increases the risk of complications.¹²⁻¹⁷ Due to the exclusion of IIA, the patient's quality of life often worsens. However, it is a method that in the experienced center gives a great chance to survive the patient during rupture of such an aneurysm from a small incision or even puncture of the artery below the inguinal ligament. In some cases, the anatomical structure of the iliac arteries does not allow the use of intravascular therapy or significantly increases the risk of complications.¹⁸ Due to the exclusion of IIA, the patient's quality of life often worsens. However, it is a method that in the experienced center gives a great chance to survive the patient during rupture of such an aneurysm from a small incision or even puncture of the artery below the inguinal ligament. Classical treatment is not free of any complications. The most important factors are anatomical conditions, type of access, extent of the procedure, collision with large venous vessels, which in a significant percentage with very changed anatomy caused by hematoma in a tight area (pelvis) can be damaged, which causes a significant slowdown of the procedure, urinary system, sex structures.¹⁹⁻²³

Aim

The goal of this research was to present the most important factors of iliac artery aneurysms.

Description of the case

The patient was admitted to the Department of Vascular Surgery in the emergency room mode to the Emergency Room with edema of the left lower limb, where iliac vein thrombosis was diagnosed and femoral in doppler ultrasound. Anticoagulation and compression therapy were included. After identifying the potential cause of the patient's local condition, he was discharged home. The treatment started did not bring a good effect, the pain gradually increased in the left lower abdomen, there was a fever and increased levels of leukocytes in the blood. Due to severe pain, the limb was forced involuntarily in the left hip joint. The patient was once again admitted to the Admissions Room, where laboratory tests and abdominal angio-CT examination were performed. An imaging study described an inflammation of the left common iliac artery. The patient was then referred to the Vascular Surgery Department. An in-depth analysis of the Angio-CT image of the abdominal cavity allowed

for a change in diagnosis - fractured left iliac artery aneurysm. The decision was made to treat the rupture with a stent graft (coated stent) from access by exposing the femoral artery. Such a method requires preliminary diagnostics on the operating table - arteriography, which can also provide additional information about the location and the extent of arterial wall injury, thus it does not take away the possibility of transition to classical treatment if necessary, it also gives the chance to temporarily close blood flow outside the vascular bed. Accordingly, arteriography was performed on the basis of which the size of the damaged vessel was dimensioned and the patient was qualified for intravascular treatment. The Stent-Graft was implanted into the left common iliac artery and the coils implanted to turn off the left internal iliac artery, leaving it would cause Type I leakage. In the postoperative period, the patient's general condition remained good, while elevated inflammatory parameters (leukocytosis and CRP) and elevated body temperature were observed. Empirical antibiotic therapy was included. Blood cultures were obtained that were sterile. Contracture and forced flexion of the lower left limb in the hip joint resolved after three days. The patient was discharged home in good condition. Due to persistent fever of unclear etiology in the early period after discharge from the vascular ward, he was referred by the primary care physician to the Department of Infectious Diseases, where full diagnostics was carried out without obtaining a response regarding the etiology of fever. Currently, the patient remains in outpatient control in good general condition, without fever. The control angio-CT scan showed normal flow through the Stent-Graft hip vessels, the pressure symptoms completely disappeared.

Discussion

In the above description of the young man's case, it is noteworthy that the ailments with which he reported to the Admissions Room were non-characteristic. Beginning with the forced bending of the left lower limb caused by hematoma exerting pressure on the ilio-lumbar muscle, then iliac vein thrombosis caused by pressure on the venous vessels. Leukocytosis and elevated body temperature were most likely associated with pressure on the ureter, which resulted in a disorder of the urinary outflow from the left kidney or an inflammatory (bacterial or fungal) factor that could have caused an artery wall rupture in 39-year-olds. Also a potential cause of selective rupture of the iliac artery in the absence of pathology in other vessels is mechanical trauma, which could probably have occurred 15 years earlier during beating.

Conclusion

Review of the literature did not show numerous similar cases and lack of information about long-term effects

of endovascular or classical treatment in young people. This case contributes to a better understanding and characterization of a rare pathology. This case is demonstrating that both surgical and endovascular treatment can be performed with efficient and good result.

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