

Acute Arterial Occlusion of Upper Extremity in a Patient with Preoperative Leriche Syndrome

Preoperatif Leriche Sendromlu Hastada Gelişen Üst Ekstremitte Arteriyel Tıkanıklık

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ABSTRACT

Leriche syndrome is the obstruction of the infrarenal aorta or bilateral iliac artery bifurcation. It is a peripheral vascular disease and can affect both lower extremities. It is a rare disease with high mortality rates. The characteristic symptoms are claudication in the leg, decreased or absent femoral pulses and male erectile disorder. Leriche syndrome's treatment is surgery.

Key Words : Leriche Syndrome , Acute Arterial Embolism, Case report

ÖZ

Leriche sendromu, infrarenal aorta veya bilateral iliak arter bifurkasyonun tıkanmasıdır. Periferik vasküler hastalık olup her iki alt ekstremitayı tutar. Nadir görülen ve mortalitesi yüksek bir hastalıktır. Karakteristik semptomları bacakta kladikasyo, femoral nabızlarda azalma veya kaybolma ve erkeklerde erektil bozukluktur. Leriche sendromu tedavisi cerrahidir.

Anahtar Kelimeler: Leriche Sendromu , Akut Arteriyel Emboli, Olgu sunumu

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Introduction

Leriche Syndrome is a type of peripheral vascular disease and rarely seen. Leriche Syndrome is a clinical entity with high mortality due to obstruction of the infrarenal aorta and bilateral iliac artery bifurcation. The main cause of this syndrome is atherosclerosis. It often involves men over 50 years old.

Characteristic symptoms include claudication in one or both legs, pain in walking and resting legs, decreased or lost femoral pulses, and erectile disorder in men [1]. In this article, we present a patient with acute arterial upper extremity who developed preoperative aortic bifemoral surgery for Leriche Syndrome.

Case Report

A 55-year-old male patient was admitted to Niğde Ömer Halisdemir University Medical Faculty Training and Research Hospital Cardiovascular Surgery Clinic. The patient had a history of intermittent claudication and had a history of smoking. Cardiology consultation was performed for possible coronary artery disease. Coronary angiography was recommended to the patient and the procedure was performed. Coronary angiography was performed and no lesion was detected. Aortic-iliac occlusion was detected by thoraco-abdominal contrast tomography. The patient was planned to undergo aorto-bifemoral bypass operation and hospitalized for preoperative preparations. Vital signs were systolic / diastolic blood pressure 120/80 mmHg, pulse 80 / min, respiratory rate 14 / min, fever 36.1 C, oxygen saturation in room air was normal. There was no difference in right and left blood pressure. The patient's general condition was good. He was conscious, cooperative and oriented, and bilateral lower extremity peripheral pulses could not be obtained by physical examination. All other system examinations were normal. In laboratory tests, glucose 101 / dl (80-115 mg / dl), BUN 15 mg / dl (9.8-20.1 mg / dl), creatinine 1.2 mg / dl (0.6-1.3 mg / dl), sodium 139 mmol / L (136) -145 mmol / L), potassium 3.8mmol / L (3.5-5.1 mmol / L) In the complete blood count, the white blood cell was 11.8 U / L (410.3 U / L), Hemoglobin 15.2 g / dl 13.5-17.5 g / dl), Hematocrit 46.1 (41-53%), platelet count 184 103 / μ L (156-373 μ L). Direct chest X-ray was normal.

During the patient's preoperative preparations, he was immediately taken to thrombo embolectomy with brachial incision to the left upper extremity because of sudden onset pain, coldness and pulselessness in the left upper extremity.

Brachial artery, radial and ulnar arteries were rotated one by one under local anesthesia and thrombo embolectomy was performed with 4F Fogarty from the brachial artery. Postoperative distal pulses were palpable.



Figure1: Preoperative aortic image of the patient

The next day, the patient was operated in a supine position under general anesthesia with local site cleaning. The midline was entered through an abdominal incision. Infrarenal abdominal aorta was suspended from posterior peritoneum. The proximal anastomoses of the 16 * 8 mm Dacron graft was performed end to side with a side clamp under the inferior mesenteric artery to the aorta. Common femoral arteries were bilaterally suspended and distal anastomoses were performed end to side. Postoperative distal pulses were obtained manually and the patient was discharged without any complications.



Figure 2: Preoperative femoral artery image of the patient.

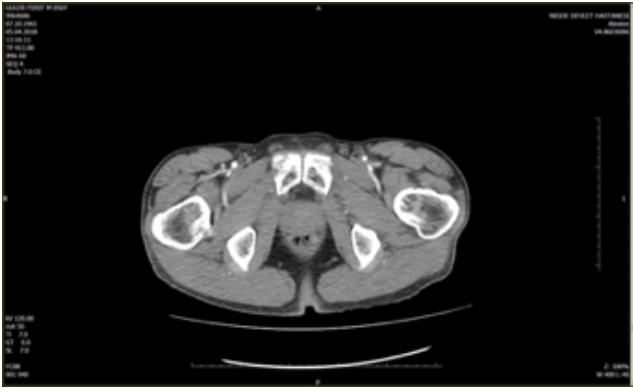


Figure 3: Femoral artery image of the patient approximately eight months postoperatively

Discussion

Atherosclerosis is one of the most important health problems of our age despite advancing technology. The most common disease of the infrarenal aorta is atherosclerosis and it is important in the etiology of Leriche syndrome. Leriche Syndrome is an atherosclerotic occlusive disease of the infrarenal aorta and iliac arteries. There are three types of Leriche syndrome.

Leriche Syndrome type I constitutes 5-10%. Occlusive lesions are located in the proximal part of the distal abdominal aorta and common iliac arteries and are common in women. Type II constitutes 35%. Lesions are common in both abdominal aorta and iliac arteries. The disease is confined to abdominal vessels. Type III constitutes 60%. There are bilateral diffuse lesions in both the abdominal aorta and iliac arteries and femoral arteries. Generally, patients in this group are frequently seen in elderly and men. Associated diseases such as coronary and cerebral artery diseases are common. The risk of mortality and morbidity is higher in type III patients and life expectancy is low. Studies have shown that the main sources of collateral flow in patients with Leriche syndrome are internal mamarian artery, superior and inferior epigastric arteries. The contribution of the internal mamarian artery to lower extremity perfusion with colleteral branches can reach up to 50% [2]. Internal mamarian artery is an important source of collateral perfusion in patients with Leriche syndrome. In patients with suspected peripheral arterial disease or at risk of peripheral arterial disease, anastomotic arteries to be used for surgical intervention should be evaluated [3].

Our patient was considered to be Type II due to his lesions, although he was a male. The classic triad of Leriche Syndrome is intermittent claudication, decreased sexual power, and reduced or inability to achieve femoral artery pulsations [1]. The claudication that occurs with exercise is almost always the earliest finding. Collateral circulation is sufficient to feed the leg during rest but is inadequate during heavy exercise, which causes a 5-10 fold increase in blood flow. Paleness in the legs and feet, palpation of both femoral artery pulsation can be taken very lightly or not, popliteal and tibial artery pulsations cannot be taken, skin atrophic changes, ulcerations, ischemic necrosis or gangrene can be seen. In this syndrome, hip and leg pain is seen as vertebral degenerative changes, nerve root irritation as a result of disc herniation, diabetic neuropathy, such as pain caused by the need to distinguish. Acute obstruction of the Abdominal aorta is associated with a high mortality rate in the early period [4]. Nonoperative management of Infrarenal aortic obstruction is associated with high mortality and limb loss [5]. In these patients, the diagnosis can be made easily by anamnesis and physical examination. Ultrasonography and Computed Tomography are used in the diagnosis of Leriche syndrome. Leriche syndrome treatment is surgery. The application of aorta-bifemoral bypass graft is commonly found in iliac arteries. Aorta-bifemoral bypass graft application (90-95%) and aorta-iliac endarterectomy (5-10%) methods are used [1].

In our case, during the patient's preoperative preparations, he was immediately taken to thromboembolectomy with brachial incision to the left upper extremity because of sudden onset pain, coldness and pulselessness in the left upper extremity. Because A pulseless, cold and white hand is an indication for brachial artery exploration [6]. Brachial artery, radial and ulnar arteries were rotated one by one under local anesthesia and thromboembolectomy was performed with 4F fogarty from the brachial artery. Postoperative distal pulses were palpable.

Atherosclerosis is a insidious disease that could be become in any situation. Our case showed that acut arterial occlusion could be co exists even in the preparation of the main atherosclerotic disease such as Leriche syndrome.

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