Journal of Clinical Cases and Reports

ISSN: 2582-0435 Case Report | Vol 4 Iss S6

Axillary Pullout Syndrome after Axillary Femoral Bypass Surgery in a Patient with Lerishe Syndrome

Huseyin Avni Solgun[1*] and Farid Gojayev[2]

[1]*Department of Pediatric Hematology and Oncology, Basaksehir Cam and Sakura Training and Research Hospital, Health Science University, Istanbul*

[2]*Department of Pediatric Cardiovasculer Surgery, Medical Park Bahcelievler Hospital, Atınbas University, Istanbul*

Correspondence should be addressed to Huseyin Avni Solgun, hsynavn@gmail.com

Received: October 12, 2020; Accepted: November 06, 2020; Published: November 13, 2020

ABSTRACT

BACKGROUND

Lerische syndrome is a disease characterized by thrombotic occlusion of the disatal artery of the renal arteries.Ultrasonography and computed tomography (CT) scan are the main diagnostic tests. In our case, the diagnosis was made by CT scan. Axillary femoral (AF) bypass is one of the extra anatomic bypass operations and is one of the preferred operations in arterial occlusive diseases. Recently, indications for axillary femoral bypass surgery have been shown in the literature as postoperative synechias, retroperitoneal fibrosis and intraabdominal radiotherapy.

CASE

A 17-year-old patient was admitted to the outpatient clinic with complaints of lower extremity pain and claudication at rest. Axillary femoral bypass was preferred in this patient because the anatomic adhesions secondary to previous abdominal operation made aortabifemoral surgery impossible.

CONCLUSION

In this case report, we want to emphasize the rarerity of axillary pullout syndrome after axillaryfemoral bypass operation and to emphasize the importance of graft implantation in the medial region of the axillary artery to prevent axillary pullout syndrome (APS).

KEYWORDS

Lerische syndrome; Axillaryfemoral (AV) bypass operation; Axillary pullout syndrome (APS)

INTRODUCTION

Extra anatomic bypass was first performed in 1950-1960. AF bypass is an anastomosis between the axillary and femoral arteries with polytetrafluoroethylene or gore-tex graft.

Citation: Huseyin Avni Solgun, Axillary Pullout Syndrome after Axillary Femoral Bypass Surgery in a Patient with Lerishe Syndrome. J Clin Cases Rep 4(S6): 5-8.

In 1952, Freeman and Leeds performed revascularization of the femoral artery to the contralateral superficial femoral artery by subcutaneous passage to the opposite side. Axillofemoral bypass operations were initially performed only in cases where anatomic aortobifemoral bypass could not be performed [1].

Afterwards; aortoenteric fistulas, patients with severe cardiopulmonary risk, adhesions due to previous intraabdominal surgery, patients with retroperitoneal fibrosis and radiotherapy to the abdominal region were identified as operation indications [2].

Leriche Syndrome (LS), also commonly referred to as aortoiliac occlusive disease , is a product of atherosclerosis affecting the distal abdominal aorta, iliac arteries, and femoropopliteal vessels [3]. Leriche Syndrome is caused by atherosclerosis. Modifiable risk factors for atherosclerosis include hypertension, diabetes mellitus, nicotine, hyperlipidemia, hyperglycemia, and homocysteine. Non-modifiable risk factors for atherosclerosis include age, gender, race, and family history [4]. Patients commonly present with claudication, which is cramping in the lower extremities (hips, thighs, buttocks) reproducible by exercise. A detailed history is essential in determining the location, severity, and duration of symptoms. While impotence and sexual dysfunction may occur in the majority of patients, the hallmark of Leriche Syndrome is reduced or absent femoral pulses [5]. However, due to collateral vasculature, limb-threatening ischemia is not universal [6].

CASE REPORT

A 17-year-old patient was admitted to the outpatient clinic with complaints of lower extremity pain and claudication at rest. He had no history of diabetes or coronary heart disease. The patient had a history of inguneal hernia operation and no other specific data were reported. Physical examination of the patient included 10 cm long scar on abdominal rectus muscle and 5 cm × 8 cm diameter umblical herni at umbilical region. hence, aortabifemarol operation was not preferred. In computed tomography; there was no aortic occlusion, aortic occlusion due to infrarenal level and occlusion of superficial and profundal femoral arteries (Figure 1 and Figure 2). Axillary femoral bypass was preferred in this patient because the anatomic adhesions secondary to previous abdominal operation made aortabifemoral surgery impossible.

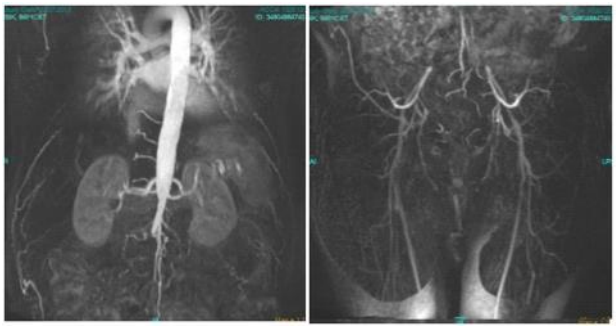

Figure 1 and Figure 2: Total infrarenal aortailiac occlusion (Leriche syndrome).

The operation was started with general anesthesia. A transverse infraclavicular incision was made and the clavipectoral fascia was opened. Among the main fibers of the pectoralis, the subclavian artery; vascular structures and brachial plexus were observed. The right sybclavian axillary artery was evacuated. An 8 millimeter PTFE graft was applied from the proximal pectoralis to the axillar artery. After graft implantation into subcutaneous tissue; distal anastomosis was performed to the proximal superficial femoral arteries. There was minimal tenderness in the right upper extremity postoperatively, but general follow-up was normal and the patient was discharged on the fourth day.

Three weeks after discharge, the patient was admitted to our hospital again with acute swelling and pain in the right infraclavicular region. Instant thorax tomography was performed. In history; the patient said that the pain aggravated by sudden movements. In Physical

examination there was a large and pulsatile mass in the infraclavicular region (Figure 3).

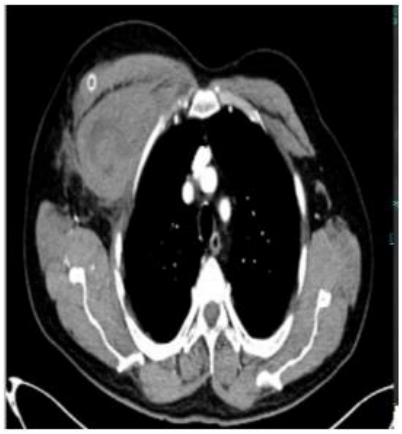

Figure 3: Hematoma and graft view of pektoral muscle.

The patient's blood pressure was 108/55 mmHg, right femoral pulse was absent and there was no severe ischemia, motor or sensory loss. The patient was immediately operated. After bleeding control with clavipectoral incision; a torn axillar artery and a fragmented PTFE graft was observed (Figure 4). Damaged arterial vessel area of 2 cm diameter was repaired with patch graft. The axillofemoral graft was thrombocytosed and separated. There was no complication in postoperative follow-up.

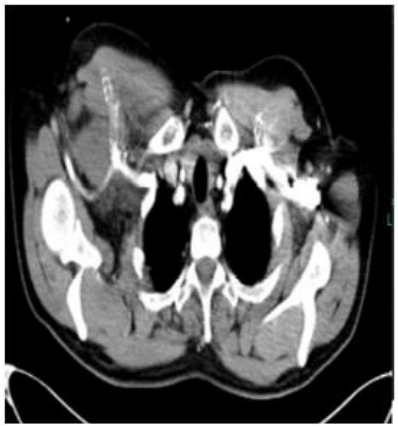

Figure 4: Laseration and hematoma of graft in anastomosis line.

Microbiological culture tests taken from the anostomosis were negative and the patient was discharged 1 week after the operation.

1 month after discharge; After the wound healing period, a new operation was planned.

DISCUSSION

Proximal anastomosis complications of axillofemoral bypass are infections, thrombosis, brachial plexus injury, pseudoaneurysms and suture line localization in 10% of cases, which leads to failure of the anastomosis [7]. Medial graft localization is recommended in proximal anastomosis to prevent these complications [8].

In the literature, previous APS cases are thought to be related to increased tension. Similarly, there was increased tension between subclavian arteries and grafts, especially in sudden shoulder movements in our case [9].

Lerische syndrome is a disease characterized by thrombotic occlusion of the disatal artery of the renal arteries. The classical signs of the syndrome are pain associated with exercise in the lower extremity (claudicatio), inability to palpate femoral pulse and impotence in male cases [10]. Ultrasonography and CT are the main diagnostic tests. In our case, the diagnosis was made by CT.

Although aortabifemoral bypass operation was normal in this patient, AVF bypass was preferred for synechia due to previous intraabdominal operation and umbilical herni at the patient. To perform medial localized grafts in proximal anastomosis operations is very important to decrease anastomostic mobility and stress.

CONCLUSION

APS is a rare complication after axillaryfemoral bypass operation. In axillary femoral bypass operations; anastomoses should be performed between the axillary artery and the graft on the medial side of the pectoralis minor muscle as much as possible and we believe that this approach is helpful in preventing rupture.

REFERENCES

1. Nguyen KP, Perrone KH, Rahman A, et al. (2016) The role of axillofemoral bypass in current vascular surgery practice. The American Journal of Surgery 211(5): 968-971.
2. White GH, Donayre CE, Williams RA, et al. (1990) Exertional disruption of axillofemoral graft anastomosis: 'The axillary pullout syndrome'. Archives of Surgery 125(5): 625-627.
3. Pascarella L, Aboul Hosn M (2018) Minimally invasive management of severe aortoiliac occlusive disease. Journal of Laparoendoscopic & Advanced Surgical Techniques 28(5): 562-568.
4. Diehm C, Schuster A, Allenberg JR, et al. (2004) High prevalence of peripheral arterial disease and co-morbidity in 6880 primary care patients: Cross-sectional study. Atherosclerosis 172(1): 95-105.
5. Wooten C, Hayat M, du Plessis M, et al. (2014) Anatomical significance in aortoiliac occlusive disease. Clinical Anatomy 27(8): 1264-1274.
6. Ahmed S, Raman SP, Fishman EK (2017) CT angiography and 3D imaging in aortoiliac occlusive disease: Collateral pathways in Leriche syndrome. Abdominal Radiology 42(9): 2346-2357.
7. Samotowka M, Kahn MB, Roberts AB, et al. (1995) Thin-walled polytetrafluoroethylenes graft failure is a cause of axillary pullout syndrome. Surgery 117(1): 113-114.
8. Chousein S, Yuksel V, Geldi O, et al. (2014) A rare complication after axillofemoral bypass operation: Disruption of the proximal anastomosis: Single case after 12 years' experience in extra-anatomic bypass surgery. Vascular 22(3): 206-208.
9. Liu CH (2009) Exertion can disrupt axillofemoral bypass grafts. Nursing2019 39(3): 63.
10. Demirgan S, Şitilci AT, Solak S, et al. (2017) Leriche sydrome. Turkish Journal Algology 29(1): 38-42.