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Case Report

Irreversible Acute Leriche Syndrome in a Young-Adult African: Report of a Life-Saving Therapy in Burkina Faso

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Abstract: Leriche Syndrome is arterial occlusion of the aortic bifurcation with ischemic symptoms of both legs that is associated with considerable morbidity and mortality. The authors report a case of late diagnosed acute Leriche Syndrome in a 37 year-old male smoker in Sub-Saharan Africa at the necrotic stage with life threatening multiple organ dysfunctions.
Keywords: Leriche Syndrome, Africa, Lower limb ischemia, Double amputation, Burkina Faso.

INTRODUCTION

The definition of Leriche's syndrome has evolved since the first successful operation by René Lercihe and André Morel in 1948 [5]. Currently, it represents an arterial occlusion of the aortic bifurcation with ischemic symptoms of both legs. Occlusion of the distal aorta and iliac arteries is associated with considerable morbidity and mortality [8]. When it acutely occurs, rapid diagnosis and therapy are crucial for the survival of the patient. We report a case of late diagnosed acute Leriche Syndrome in Burkina Faso, West Africa at the necrotic stage with life threatening metabolic disorders.

CASE REPORT

DA was a 37 year-old male Teacher in a small town of Burkina Faso. He suffered from acute pain of both lower limbs which started after a volleyball game. The patient refused to visit the local infirmary and decided for self-medication. Five days later, the pain increased and was associated with total inability to move both legs; there was insensitiveness as well as appearance of skin darkness of both feet which gradually ascended up to the knees. In the previous medical history, the patient was a smoker; he was not hypertensive or diabetic. The clinical examination found blood pressure at 180/90 mmHg, heart rate at 108 beats / min; the temperature was 38°C and the body mass index was 25.32 kg/mm^2. Both lower limbs (Photo 1) were cold and completely insensitive from the toes to mid-thighs with skin necrosis up to the upper 1/3 of legs. All peripheral pulses were abolished on both limbs. The cardiac and general examinations were normal. We concluded to irreversible acute Leriche's syndrome. Aortic and femoral ultrasound confirmed the absence of arterial flow bilaterally; Common iliac flow is strongly disturbed but no obvious abdominal and pelvic obstacles were found. Electrocardiogram showed sinus rhythm with first-degree heart block. Transthoracic echocardiogram and chest X-rays were normal. Laboratory tests found hypercreatinemia at 1672 µmol/L, hyperuraemia at 43.21 mmol/L, 14,750 white blood cells/mm^3; Ionic disorders including hyperkalemia at 7.05 mmol/L and hyponatraemia at 118 mmol/L. Angio CT scan was postponed due to contraindication of contrast liquid injection. The urgent treatment consisted of administrating painkillers, iononic solutions, enoxaparin 0.6 ml BD, ceftriaxone 2 g/D and metronidazole 1.5 g/D. He underwent three times hemodialysis that reduced serum creatinine down to 444 µmol/L at day 6. Therefore we performed bilateral transfemoral amputation (Photo 2). We found per-operatively a complete obstruction of both superficial femoral arteries by clots (photo 3). We removed them by Fogarthy catheter until we had a good flow. After operation, there was a gradual normalization of serum creatinine which was 115 µmol/L at day 20. Late angio CT scan of abdominal aorta, iliac bifurcation and the femoral arteries did not found any arterial anomaly; in particular there was no thrombosis, embolism or dissection (Photo 4). The wounds healed without necrosis of the stumps. The patient was discharged from the hospital on day 37 of hospitalization with appointments in psychiatry and physiotherapy.

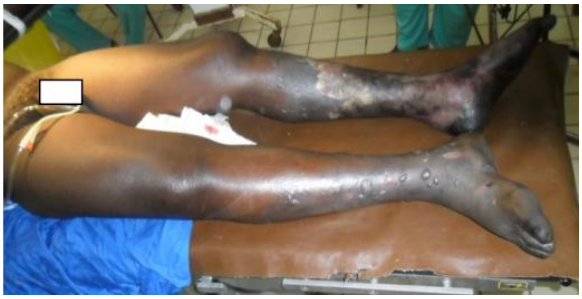

Photo 1: Bilateral necrosis of the lower limbs

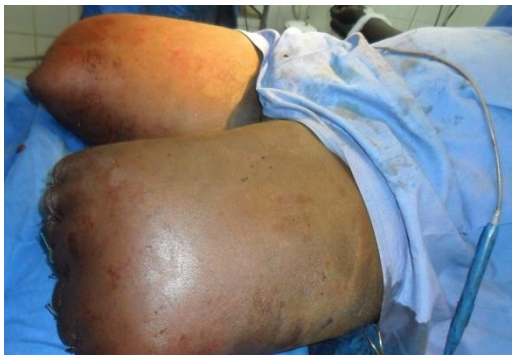

Photo 2: Double trans-femoral amputation.

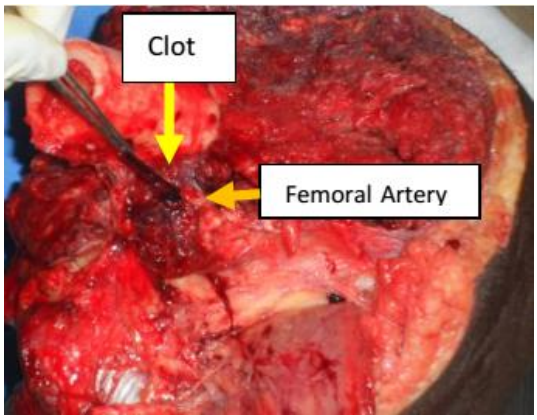

Photo 3: femoral artery occluded by clots

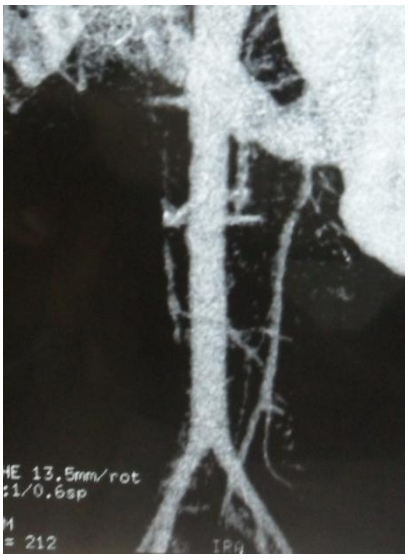

Photo 4: normal aorto-iliac CT scan (checked post operatively)

DISCUSSION

Leriche syndrome refers to aorto-iliac occlusive disease. It is due to thrombotic occlusion of the abdominal aorta just above its bifurcation [5]. The classic symptoms include inability to maintain penile erection, fatigue of both lower limbs, intermittent bilateral claudication with ischemic pain, and absent or diminished femoral pulses along with pallor or coldness of both lower extremities [4]. Although this syndrome was firstly described as chronic manifestation, it can occur as acute syndrome [1, 3, 6, 8]. In most of sub-Saharan African countries, the lack of doctors particularly in the small towns is a factor of late diagnosis. AD was admitted at necrotic stage with life threatening metabolic disorders. Indeed, rhabdomyolisis due to muscular infarction is responsible of renal failure that in turn leads to severe hyperkalemia [2] with a risk of multiple organ dysfunctions including arhythmia, sudden death by cardiac arrest or hypovolemic shock. We believe that the patient was saved by the urgent hemodialysis that made possible anesthesia for double amputation above the knee. Regarding the possibly etiologies, the pre-operative cardiac investigations and post-operative angio CT scan did not found any obvious cause in the cardiovascular system. The only cardiovascular risk was the smoking history. However, as the arterial wall was normal at angio CT scan, our staff concluded to probable embolus of the aorto-iliac bifurcation that secondary migrated bilaterally to obstruct the peripheral arterial system.

CONCLUSION

Leriche syndrome occurs in sub-Saharan Africa although it is not reported enough. The challenge is to make early diagnosis to avoid death or major amputation.

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