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FIRST LIMB SALVAGE FOLLOWING VASCULAR TRAUMA OF LOWER LIMB AT LAAYOUNE HOSPITAL IN THE SOUTH OF MOROCCO

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ABSTRACT

Vascular injuries are increasing each day; and those of the high popliteal artery are still of grave prognosis, with a mortality of 5 to 10% and an amputation rate of 20 to 30%. We report the case of a young patient, who had trauma of the left lower limb with stabbing ischemia post traumatic, the angioscanner objectified a lesion of the high popliteal artery with arrest of arterial circulation downstream. The patient underwent arterial revascularization and lower limb salvage for the first time in Laayoune in the southern Moroccan kingdom. The evolution was favorable with good recovery of the patient. The prognosis of post-traumatic ischemia depends mainly on the severity of the trauma, the associated lesions and the time of care which is multidisciplinary, hence the importance of regional reference centers with specialized teams.

KEYWORDS: Salvage - Trauma - vascular- lower limb.

INTRODUCTION

Vascular trauma is a typical example of a vascular surgical emergency. Among the very serious vascular traumas, those involving the popliteal artery with its anatomical particularities that condition the prognosis.

Despite recent advances in the field of explorations and surgical approaches, the prognosis of these traumas remains serious with a high rate of mortality and amputation.

We report a case of rescue of a lower limb, considered as a first in the civil hospital of Laayoune in southern Morocco, in a young person who had an arterial trauma of the lower left limb causing him ischemia of his leg .

CASE REPORT

A 15-year-old boy with no antecedent was admitted in May 2019 to the MOULAY ELHASSAN BEN ELMEHDI hospital emergency department at Laayoune, in southern Morocco, four hours after a stab injury, with a point of impact at level of the posterior face of the lower third of the left thigh (Figure 1), causing him a high popliteal artery lesion with ischemia of the leg.

Figure 1 : Wound transfixiante of the lower third of the posterior face of the left thigh.

After conditioning the patient, and emergency care, the clinical examination showed a coldness, pallor and abolition of distal pulse on the side traumatized, without sensitivomotor disorders. (Table 1).[1,2,3,4,5]

Table 1: Clinical and Paraclinical Characteristics of Our Case.

Age	**15 years**
Admission deadline	4 hours
State of shock	Yes
Polytrauma	No
Contusion	No
Stage of ischemia after Blaidswell[1] and Rutherford[2]	Moderate (II)
Cutaneous opening according to couchoix and duparc classification[3]	Type II
Mechanism of trauma	Stab
Mess score[4]	4
Lescalie score[5]	12
Angioscan	Stopping the flow at the level of the high popliteal artery
Lesions of nearby structures	No

An angioscan was performed urgently, objectified a lesion of the high popliteal artery with arrest of arterial circulation downstream. (Figure 2)

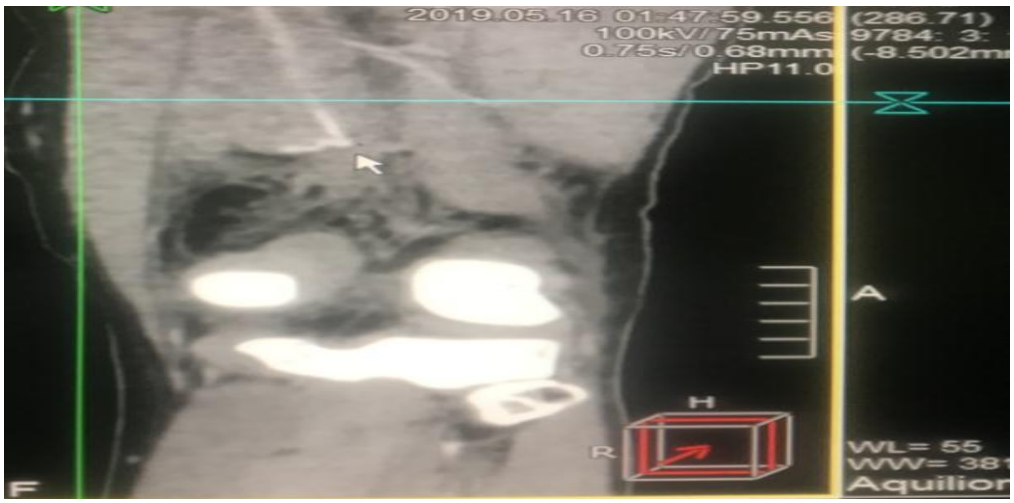

Figure 2: Angioscan showing arterial flow arrest at the level of the popliteal artery.

The patient was admitted to the operating room, the surgical exploration objectified a transfixing wound with total section of the high popliteal artery, without venous, nerve or osteoaricular lesions. (Figure 3)

Figure 3: Total traumatic section of the left supra popliteal artery.

Arterial repair was performed by an inverted venous graft (Figure 4), taken at the expense of the long saphenous vein on the contralateral side, with a good recovery of arterial continuity and good perception of distal pulses postoperatively, anti-coagulant treatment. was established with clinical and biological loan monitoring.

Figure 4: Interposition of a venous graft between the two arterial ends.

The evolution was marked by a slight, elevated muscle enzymes that became normal rapidly, with no lodge syndrome, with normal functioning of the operated lower limb.

DISCUSSION

Arterial trauma of the lower limbs affects mainly the young subject with a 30% amputation rate and up to 10% mortality.[6]

The problems posed by the traumas of the popliteal artery are essentially therapeutic. Their frequent association with other traumatic vital lesions brings them into the context of polytrauma, thus constituting a multidisciplinary emergency, requiring the intervention of a resuscitator, a radiologist, vascular surgeons, orthopedic surgeons and plastic surgeons. rehabilitator and social assistance.[7]

In front of any traumatism of the lower limb, a careful clinical examination must be done in search of the pulses, a coldness, a sensitivomotor paralysis, a breath or a thrill (pulsatile hematoma, false aneurysm, FAV...).

The examination should be symmetrical and comparative in search of asymmetry, especially in cases of oedema or shock where pulse perception is difficult.

Ischemia, suspected or attributed to spasm, in a stable situation, can be supplemented in the absence of surveillance.

One must certainly suspect an excess arterial wound in such a situation, as its lack of knowledge.

Several classifications have tried to establish scores assessing the severity of these traumas, such as: the ISS (Injury Severity Score) by Baker and Coll in 1974, the classification according to Crolais in 1982 based on seven parameters,[7] but the LESCALIE grid.[5] and the Mangled Extremity Severity Score (MESS).[4] remain the most widely used, with an indication of amputation from the start and against any revascularization, if the MESS score is greater than ≥ 7, or the ESCALIE score is greater than 51.[4,5]

A revascularization, with good results according to these two scores, is indicated if MESS is lower than 7 and the score of ESCLALIE is lower than 40,[4,5] it is the case of our patient where the revascularization was the indication of choice with very satisfactory results.

For our patient an interposition of a venous graft was considered since the arterial continuity solution exceeded 2 cm.[8]

In the postoperative period, heparin therapy is mandatory, relayed by heparin from low molecular weight. The monitoring of revascularization is essentially clinical. Doppler is useful when distal oedema makes pedal and tibial pulse perception difficult. The patient and the family should be aware of the severity of the trauma, the risk of failure, and multiple complications that may require sacrifice of the limb.

CONCLUSION

Clinical examination is a fundamental step in the diagnosis and improvement of the prognosis of limb trauma.

It is important to stress the importance of repeated clinical examinations to diagnose the initially asymptomatic lesions in time.

Revascularization is the ideal treatment in case of arterial injury, but sometimes it is life-threatening in certain situations, hence the advantage of precise initial stratification of patients according to prognostic scores in order to select patients whose revascularization is immediately contraindicated and amputation will be mandatory.

The favorable state of our patient, allowed us to perform the first revascularization of an arterial trauma of the lower limb with success in our structure.

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