

Critical Ischemia with Viability Threatened: Fibrinolysis Salvage Alternative with Ateplase; Case Report

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Abstract

Case Report

Introduction: arterial ischemia defined as stenosis or occlusion of the aorta either of distant arteries from the heart, is a vascular emergency with a high risk of loss of a limb and associated morbidity and mortality [1]. **Clinical Case:** A 79-year-old male patient with a clinical history of psoriasis and chronic pain in the lower limbs followed by rheumatology, with a previous 60-year smoking habit of 10 units daily, who attended the emergency department with severe pain in the right lower limb with paresthesias that make it impossible to walk for 6 hours after lifting weights at home. On physical examination the right lower extremity, intense pain on palpation, cold, femoral pulse, popliteal present, anterior and posterior tibial absent, decreased mobility, absent foot sensation. **Discussion:** In this particular case, it is noteworthy that the only risk factor that the patient presented for developing critical ischemia with threatened viability was smoking and as a salvage measure, fibrinolysis with alteplase was performed, monitoring the distal circulation with a positive response of arterial reperfusion distal. **Conclusion:** It should be noted that as a salvage measure evaluating the patient's risk-benefit, fibrinolysis with alteplase can be performed. It is essential to establish an early diagnosis that allows timely therapy to be established and has a positive impact on the prognosis of these individuals, since they present a high rate of morbidity and mortality [4].

Keywords: Arterial ischemia, Smoking, Thrombolysis, Alteplase.

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INTRODUCTION

The illness arterial defined peripheral what stenosis or occlusion of the aorta either of arteries far from the heart is a vascular emergency with a high risk of limb loss and associated morbidity and mortality [1], it is a manifestation of an underlying condition, atherosclerosis. Atherosclerosis remains the leading cause of death and premature disability. This condition is highly prevalent, at least found in 10% of the population general Y in twenty% of the people greater of 65 years [2]. The factors of risk associates are many, but the illness have predilection for determined regions of the circulation like arteries of the members lower, generating So claudication intermittent until critical limb ischemia lower [3].

Critical ischemia of the lower limbs produces pain at rest, ulceration or gangrene that is objectively

attributed to arterial occlusive disease [3] and puts at risk limb viability, requiring specialized management strategies. During the last decade has seen great advances in the variety of endovascular devices and in the techniques to try the ischemia criticism of members lower [4]. Between these progress I know finds the angioplasty with ball, every time with the availability of better technology what gives top results, together with the balls of angioplasty liberators of medication [5].

Patients with lower limb ischemia typically fall into two groups, those patients with intermittent claudication (IC) and patients with chronic ischemia threatening of members lower (ICAM), depending of the symptom Y his presentation [5]. The finished "ischemia chronicle threatening of members lower" today in day is preferred for describe the condition known what ischemia criticism of the tip. (ICE) CI and

ICAMI are managed differently due to discrepancies in natural history of each one and the expected results after treatment. A proper decision of Management of these two pathologies requires extensive knowledge of the nature of the disease illness. The treatment should be chord with the factors of risk of every patient Y their symptoms [5].

CLINICAL CASE

We present the case of a 79-year-old male patient with a clinical history of psoriasis and chronic pain in the lower limbs followed by rheumatology, with a previous smoking habit of 10 units a day for 60 years, who attended the emergency room with severe limb pain. Lower right with paresthesias that makes it impossible to walk for 6 hours after lifting weights at home. On physical examination the right lower extremity, intense pain on palpation, cold, femoral pulse, popliteal present, anterior and posterior tibial absent, decreased mobility, absent foot sensation.

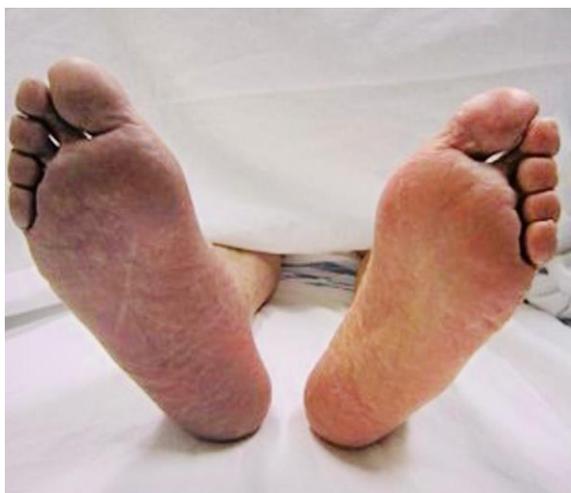


Figure 1: Critical ischemic right lower extremity with threatened viability

In paraclinical biometry and normal renal function, elevated D-dimer 8874, Angiotomography of the lower limbs was performed, in which arterial flow

was observed up to the proximal third of the right leg in the anterior, posterior and peroneal tibial arteries.

Figure 2 Angiotomography of the lower limbs.



Figure 2: Coronal slice CT angiography of the lower limbs with non-ionic contrast in the arterial phase showing flow up to the proximal third of the right leg in the anterior, posterior and peroneal tibial arteries

Considering a diagnosis of critical ischemia with threatened viability, studies recommend acting within the first 6-8 hours of the onset of the clinical picture to reduce the risk of complications and amputation of the affected limb [6]. Embolectomy surgical intervention is necessary to resolve this pathology; however, due to technical problems in the hospital, taking into account the risk-benefit of the patient as a rescue measure, it was decided to perform fibrinolysis with atepase.

RESULTS

Patient after fibrinolysis with atepase 15 mg intravenous bolus + 50 milligrams intravenous in 30 minutes, plus 35 milligrams in 60 minutes, monitoring the distal circulation presents favorable evolution, on physical examination the right lower extremity, pain controlled, pulses present from proximal to distal, mobility and sensitivity preserved.

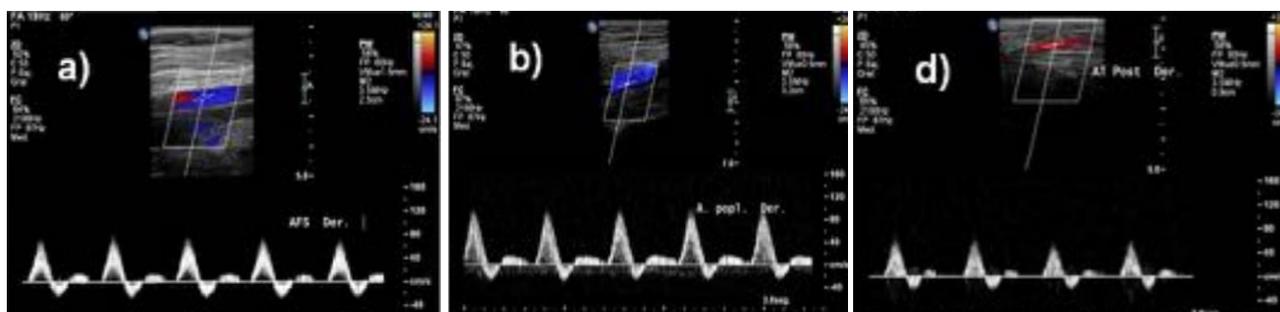


Figure 3: Arterial Doppler ultrasound of the right lower limb, color and arterial Doppler flow pattern a) Popliteal A. b) Anterior tibial A. d) Posterior tibial A

The patient recovered the patency of the arterial axes of the right lower extremity and was

discharged with anticoagulation, followed up by an outpatient clinic with no signs of ischemia.

DISCUSSION

In this particular case, it is striking that the only risk factor that the patient presented for developing critical ischemia with threatened viability was smoking. Cigarette-induced vascular injury begins with reduced nitric oxide bioavailability and increased expression of adhesion molecules and subsequent endothelial dysfunction [6]. The increased adhesion of platelets and macrophages induced by smoking generates a procoagulant and inflammatory environment. After the activation and transendothelial migration of macrophages, they internalize oxidized lipoproteins derived from oxidative modifications of vascular tissue, promoting their conversion to foam cells by transdifferentiative processes, ending in the acceleration of atherogenic processes [7].

The prevalence of arterial ischemia is 3% to 10% and occurs more commonly in men. Among the risk factors related to its development are arterial hypertension, diabetes mellitus and hyperlipidemia [8]; which the patient did not present. The diagnosis of any vascular disorder is based on the patient's medical and family history, as well as on physical examination, in which screening tests as simple as the ankle-brachial index can lead to the focus of the vascular disease in question [8]. Suspicions are corroborated with the use of diagnostic tests such as Doppler echo, arteriography, angiographic magnetic resonance, angiographic computed tomography, AngioTac among others [9].

The patient's suspicion of vascular alteration was based on his smoking habit. Because she had no other risk factors and a typical history of peripheral arterial ischemia, the history and physical examination were crucial. His symptom of claudication, in addition to the changes in the skin of his lower limbs, oriented towards the severity of his condition and led to the last diagnostic step with the use of complementary techniques. AngioTac of the lower limbs was performed (Figures 2) and the place of ischemia was observed.

The surgical options is embolectomy, the ideal is to perform an early detection of the disease to reduce the risk of loss of the limb [10].

Because the risk-benefit balance of thrombolysis is uncertain with regard to major bleeding, all patients who do not have severe circulatory compromise that endangers the affected limb should initially be anticoagulated and fibrinolysis performed as a salvage measure with atelase monitoring the distal circulation with positive response of distal arterial reperfusion.

CONCLUSION

It should be noted that as a salvage measure evaluating the patient's risk-benefit, fibrinolysis with atelase can be performed. It is essential to establish an

early diagnosis that allows timely therapy to be established and has a positive impact on the prognosis of these individuals, since they present a high rate of morbidity and mortality.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this paper.

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