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PSEUDOANEURYSM OF THE COMMON FEMORAL ARTERY, A RARE COMPLICATION OF BEHÇET'S DISEASE

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ABSTRACT

Behçet's disease is a systemic vascular disorder of unknown origin. Most often, vascular involvement during the course of the disease manifests as superficial or deep thrombophlebitis. Arterial involvement, such as pseudoaneurysms, is uncommon and may be the cause of the disease. We present the case of a young man with Behçet's disease presenting with a symptomatic false aneurysm of the left common femoral artery. Symptomatology was non-specific, and echodoppler and angioscanner were frequently used to establish the lesion. We report that management consisted of flattening the aneurysm and restoring arterial continuity. Postoperative management was straightforward.

KEYWORDS: Pseudoaneurysm; Behçet disease; Femoral artery.

INTRODUCTION

The Turkish dermatologist Hulus Behçet[1], described Behçet's disease in 1937.

Men are particularly affected by the disease in their third or fourth decade. The disease is often found in Mediterranean countries.

The disease is characterized by the traditional triad of "oral aphthosis, genital aphthosis, ocular involvement"; it mainly affects young men, with a majority of venous vascular involvement, mainly thrombophlebitis. Arterial involvement remains a major therapeutic issue in vascular surgery. Arterial aneurysms are a particular entity of vascular lesions, as they require specific treatment and influence the prognosis of these patients.

OBSERVATION

A 20-year-old man with no previous surgical history consulted the emergency department for a painful throbbing mass in the left Scarpa that had appeared 1 month ago with progressive increase in size. He was known to suffer from Behçet's disease, discovered 2 years earlier following bipolar aphthosis, recurrent phlebitis, altered general condition and inflammatory syndrome, for which he received treatment with corticosteroids, then immunosuppressants, with a good clinical and biological evolution.

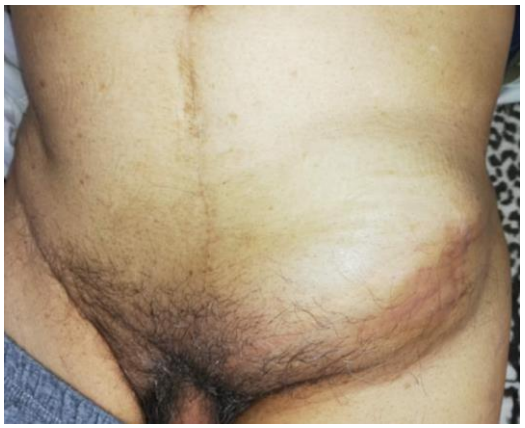

Figure 1: Image showing a large beating mass in the left Scarpa.

Examination revealed a throbbing mass of the left Scarpa, painful, immobile in relation to the superficial plane, with no visible signs of inflammation. The contralateral limb was asymptomatic.

Oral genital aphthosis (scrotum and anterior surface of the penis) accompanied by pseudofolliculitis.

Biological tests showed inflammation, with a sedimentation rate of 76 mm in the first hour and a C-reactive protein level of 63 mg/L. The fibrinogen level was 5.6 g/l, while the rest of the ionogram was normal.

Ultrasound Doppler of the limbs was not performed, as it was not available on an emergency basis in our department.

Angioscan of the aorta and arteries of the lower limbs confirmed the diagnosis of a 49mm false aneurysm of the right common femoral artery.

Arterial mapping was performed (Echodoppler of the ASD + upper limb and Doppler of the renal arteries), showing no secondary localization.

Transthoracic Echocardiography returned normal.

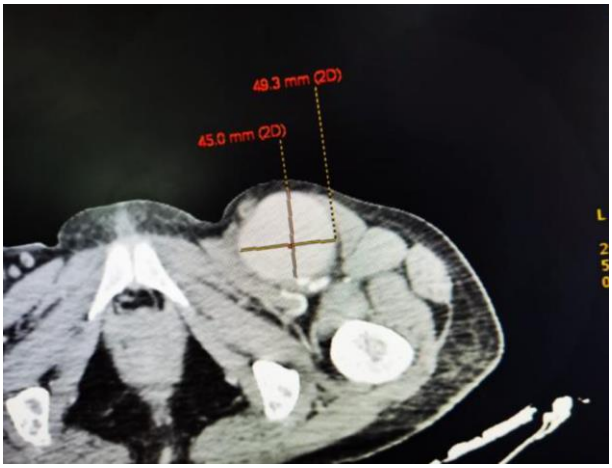

Figure 2: Angioscan showing pseudoaneurysm of the common femoral artery.

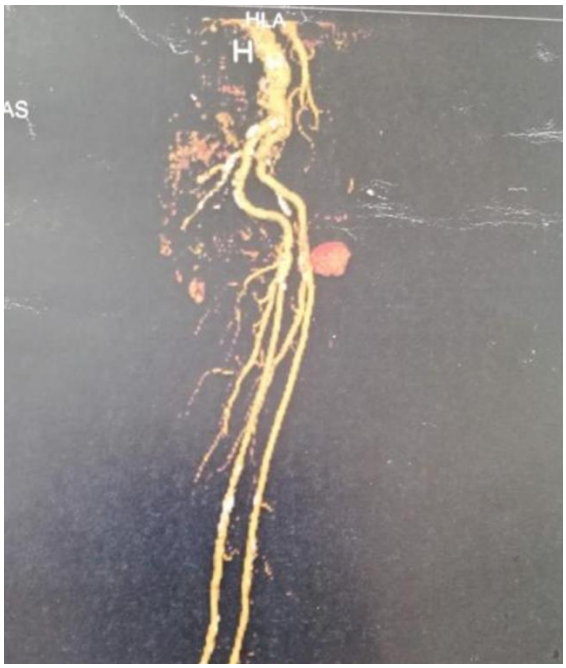

Figure 3: 3D angioscan reconstruction showing false aneurysm.

The patient was operated on under general anaesthesia, with an approach to the common femoral artery at the level of the left Scarpa. Surgical exploration revealed a voluminous false aneurysm of the femoral artery. The inflamed CFA was resected over a length of approximately four centimetres, and a PTFE prosthetic graft was inserted.

The post-operative course was straightforward, and the patient was discharged on day 7 with maintenance corticosteroids at a dose of 25 mg/d, which was maintained until normalization of the SV and fibrinogen levels.

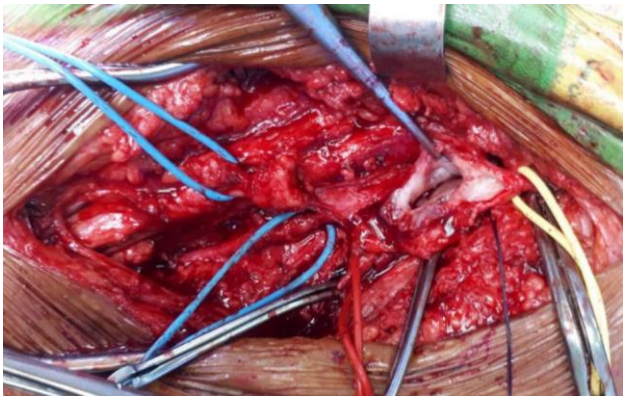

Figure 4: Surgical image showing the resected false aneurysm.

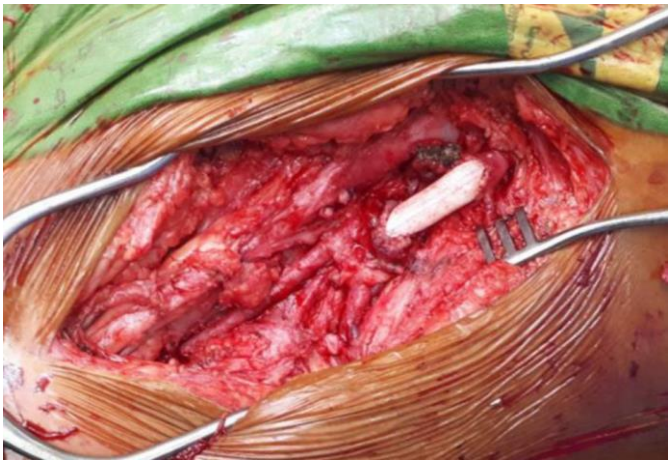

Figure 5: Restoring continuity with a PTFE Prosthesis.

DISCUSSION

Behçet's autoinflammatory vasculitis is a multi-system disease. Its most common clinical manifestations are cutaneous-mucosal and ocular involvement, forming the classic triad <<oral aphthosis, genital aphthosis and ocular involvement.>> The key elements of its diagnosis are also defined by the International Study Group for Behcet's Disease.[1,2,4]

Involvement is most often cutaneous, ocular, nervous, neurological and vascular; vascular manifestations are mainly venous, arterial involvement is much rarer, with stenoses and, above all, aneurysms.[3]

The frequency of vascular involvement in Behçet's disease varies considerably from one population to another, ranging from 2% to 46%.[5,6] Arterial

involvement is rarer, and its prognosis is more severe than that of venous involvement. It occurs in 2-7% of MB cases. In their retrospective study of 92 patients with Behçet's disease, Sekkach et al. found that 30 cases had vascular involvement.

Venous involvement was observed in 29.3% of cases, while 14.1% had arterial involvement.[7] This is likely to be underestimated, given the 34% frequency observed in autopsy series by Lakhanpal et al.[8]

Arterial aneurysmal lesions in Behçet's disease are rarer, affecting 80% of men, seven to ten years after the first symptoms of the disease.[9] They are caused by inflammation of the media, intima and vasa vasorum, resulting in parietal weakness that can lead to the formation of pseudoaneurysms, whose localization is general and can occur in various arterial territories and can compromise the vital prognosis. Mortality due to rupture is estimated at 60%.[5,9] The presence of aneurysmal lesions is a medical-surgical emergency, requiring a study of the initial pathology in order to establish a suitable medical treatment based on corticoids and immunosuppressants, their rapid evolution towards rupture being the rule, without the size of the aneurysm being considered a predictive factor.[9]

The pulmonary arteries and abdominal aorta are the preferred sites for arterial aneurysms.[5,10] Other sites include the superficial femoral artery, the brachiocephalic arterial trunk and the popliteal artery.[2,11] In the study by Bensaid et al[5], 28% of patients had aneurysmal aortic involvement, 38.5% femoral involvement, 7.5% popliteal involvement, 7.5% leg artery involvement, 8.7% carotid artery involvement and 8.7% primary iliac artery involvement.

In Behçet's disease, false aneurysms of the lower limbs are manifested by a pulsatile mass in the path of a vessel, pain on exertion or at rest, and even ischemia.[12] Symptoms may be associated with general manifestations (such as fever), and a biological inflammatory syndrome is almost invariable.[1,4] Arterial Doppler ultrasound can be used to determine the nature of vascular damage and the location of lesions.

For a long time, surgical treatment was the mainstay of therapy. It involves excluding the aneurysm and then restoring vascular continuity with an autologous venous graft, or at best with a synthetic vascular substitute (polytetrafluoroethylene or Dacron).[2,13] This surgery is particularly delicate, due to the inflammatory terrain with advanced peri-adventitis, and exposes the patient to a high risk of post-operative complications, reported in 30 to 40% of cases.[1,13] The most frequent complications are anastomotic aneurysmal recurrence and bypass thrombosis. They occur mainly as a function of the revascularization material used and the anastomosis site.

It is therefore essential to perform anastomoses away from inflammatory areas, and often reinforced with Teflon pledgets, in order to reduce anastomotic aneurysmal recurrences.[13,14]

Treatment of unruptured pseudoaneurysms has been proposed using endovascular methods, such as the use of stents (covered stents) or coiled embolization.[14,15,16] According to the study by Kim et al. they have a complication rate of less than 20%[14], mainly false aneurysms at the arterial puncture points and stent anchoring zones, endoleaks re-feeding the aneurysm and secondary stent thrombosis.[14,17] However, in our situation, these treatments could not be implemented due to the lack of necessary equipment in the emergency department. In our case, open surgical treatment was the best therapeutic option.

Medical treatment, including immunosuppressive bolus corticosteroids and postoperative cyclophosphamide therapy, must be instituted as a matter of urgency to avoid the risk of suture loosening.[1,5]

CONCLUSION

Arterial involvement in Behçet's disease is rare, and is mainly represented by abdominal aortic aneurysms. Common femoral aneurysms are extremely rare. Angioscanner is the examination of choice in the diagnostic and topographical approach to these lesions, particularly in emergency situations, offering rapid patient management. It is always important to maintain medical treatment with corticosteroids and immunosuppressants to stabilize lesions and prevent relapses of this disease.

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