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Case Report Open Access

# Carotid False Aneurysm: Complication of Behçet's Disease

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## Abstract

Behçet's disease is a chronic inflammatory systemic disease of indeterminate etiology evolving by push, characterized by an oral bipolar aphtosis and ocular involvement. Vascular manifestations or angio-Behçet are dominated by venous thrombosis (80%), arterial involvement is rare, but they are often multifocal revealed much more by aneurysms than thromboses, whose risk is the rupture that can engage the life-threatening. Medical therapy with corticosteroids and immunosuppressants should be considered before and after any surgical treatment. We report the case of a 35-year-old man with a history of Behçet's disease, admitted as part of the emergency for a preoperative carotid bulb aneurysm, who had undergone a flattening and closure of the internal carotid artery by prosthetic patch reinforced by pladjets. The evolution was good and medical treatment is undertaken.

**Keywords:** Behçet's disease; Angio-Behçet; Carotid pseudoaneurysm; Immunosuppressant

## Introduction

Behçet's disease, also known as the Silk Road Disease, is a systemic vasculitis with ubiquitous distribution [1]. His first description was probably made by Hippocrates 2500 years ago, as an endemic disease in Asia Minor, characterized by foot ulcerations, and ophthalmic involvement [2]. And it was not until 1937 that the Turkish dermatologist Hulusi Behçet defined this disease [3]. His diagnosis is based on clinical criteria [4,5].

Frequent in Japan and in the countries of the Mediterranean basin. It affects the young adult with a clear male predominance reaching 80% of cases [6].

Vascular manifestations are dominated by venous involvement [7], although rare arterial sites have a short, medium and long-term risk of death [8,9].

We report the case of a rare localization of Behçet's disease; it is a false aneurism in pre-rupture of the internal carotid artery.

## Patient and Methods

Man, 35 years old, with a history of Behçet's disease diagnosed since 2007, who presents himself at the level of the emergency department for a painful, left laterocervical beating mass, about 7 cm long axis with superficial cutaneous ulceration in the center mass (Figures 1 and 2), whose beginning seems to go back to 2 months. the carotidian pulses are present, the rest of the clinical examination finds aphtosis of the mouth and scars of genital aphtosis (Figure 3), we also find signs of peripheral neurological irritation namely peripheral facial paralysis, dysphonia and dysphagia. The biological assessment is normal, a negative serology, apart from an inflammatory balance (VS, CRP) which is disturbed.

The Doppler ultra-sound of the supra-aortic trunk (SAT) shows a large false aneurysm of the left internal carotid artery.

A pan-angiography CT scann was requested for the diagnosis and in search of other arterial localizations, revealed a false aneurism of the left carotid bulb fissured and compressing the surrounding tissue structures (Figures 4-6).

The patient underwent a flattening of the aneurysm with closure of the carotidian breach by a prosthetic patch reinforced by pladjets, then a resection of the cutaneous ulcer (Figures 7 and 8).

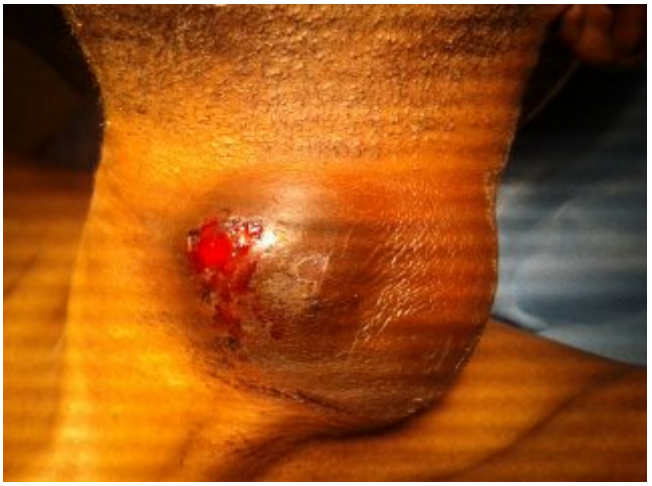

**Figure 1:** Voluminous cervical mass.

The postoperative evolution was good, without any neurological deficit with permeability of the SAT controlled by the Doppler ultrasound, the patient leave at the 05 days with adapted medical treatment based on corticosteroid therapy: Prednisone 1 mg/Kg/Jr, Colchicine 1 mg/Jr and immunosuppressant: Azathiopirine 2.5 mg/Kg/Jr.

The control at 03 months notes a good evolution with regression of the inflammatory thrust of Behçet's disease.

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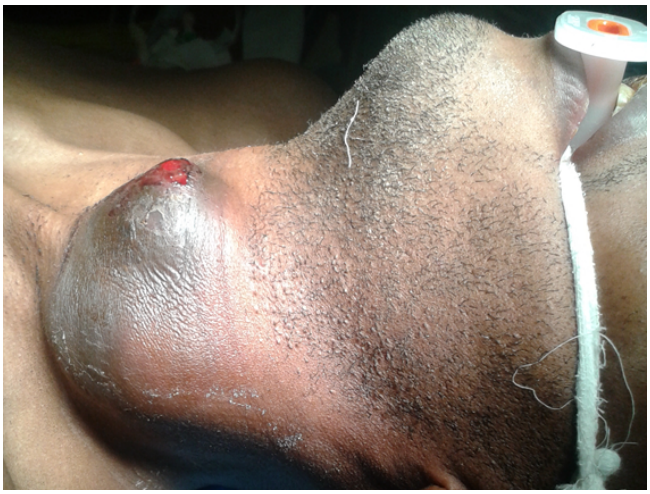

**Figure 2:** Patient Intubated on the operating table.

**Figure 3:** Genital aphtosis.

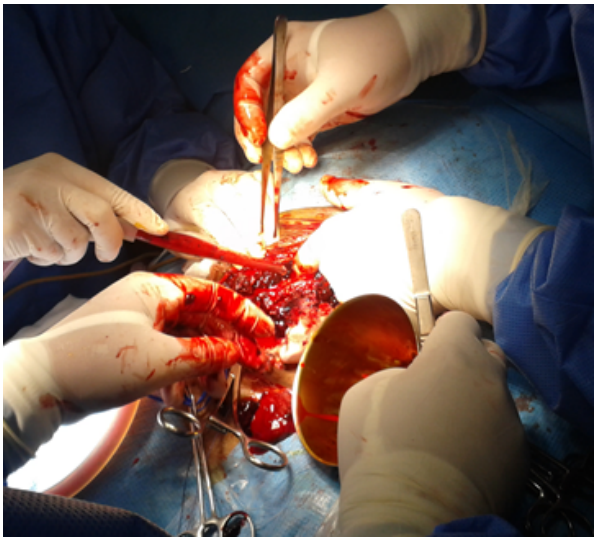

**Figure 5:** Flattening of the false aneurysm.

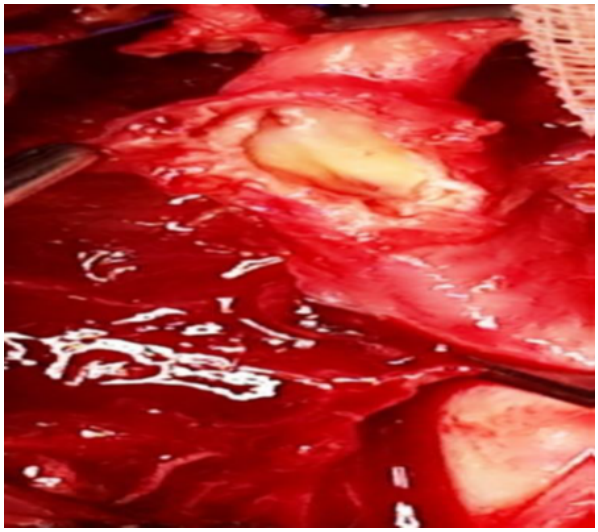

**Figure 6:** Carotid breach.

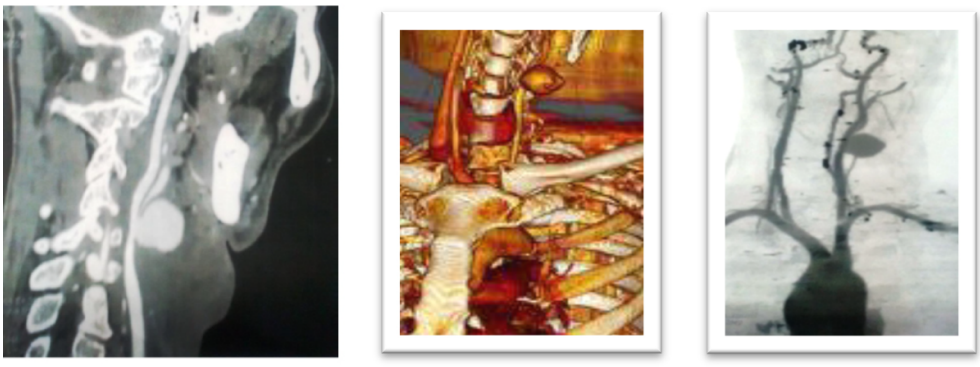

**Figure 4:** (a) CT Scan, (b,c) false aneurysm of internal carotid artery.

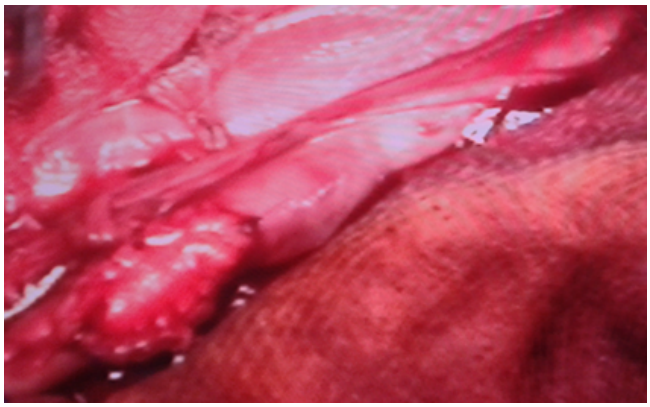

**Figure 7:** Patch closure.

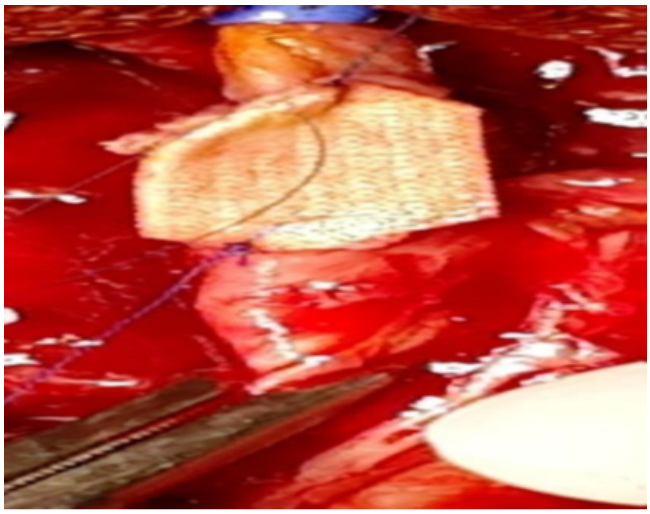

**Figure 8:** Carotid after reparation with path.

## Discussion

Vascular complications of Behçet's disease are dominated by venous pathologies (large veins) in 7 to 46% of cases [10]; these complications are frequent in countries around the Mediterranean: 21 to 36% in Morocco [11], 31% in Tunisia [7], 35% in France [12], 17% in Turkey [13].

Arterial damage is more rare. It performs a non-specific vasculitis affecting arteries of small and large caliber [14]. Often occur 3 to 8 years after the onset of illness [15] which is consistent with the case of our patient (8 years).

Carotid localization is unusual and extremely rare. The aneurysms of the extra-cranial internal carotid artery have a frequency that remains imprecise. At present, only about thirty cases are reported in the literature [16].

According to Orukaptan [17] this localization represents less than 1% of the surgical procedures on the carotid artery.

Benghorbel described 01 case of a large sacciform aneurysm partially thrombosis from the left common carotid artery pushing the laryngotracheal axis [18]. Bensaid has report the largest series of arterial localization of Behçet's disease (47 cases), described 05 cases of SAT aneurysm [19].

These aneurysms can be manifested either by neurological disorders due to the compression of the nervous elements, the case of our patient who presented a facial paralysis, or by a brutal hemiplegia, the case described by Park [20]; or dysphonia, dyspnea or dysphagia by oro-tracheal or pharyngeal compression [21,22].

Their rupture is not exceptional, Tuzun described a case of carotid aneurysm broken and operated successfully [23]. We note that aneurysmal manifestations are more frequent than thrombotic manifestations and are poorly prognostic because of the risk of rupture [24-26].

Medical treatment with corticosteroids and immunosuppressants is the first-line treatment and most often allows remission of the disease and reduces the risk of recurrence [27,28]. The surgical treatment consists of either a simple resection of the sac of the aneurysm, or a resection of the pathological artery associated with an interposition of a venous or prosthetic graft. This treatment is feasible for patients with a conserved general state and a permeable contralateral carotid axis, which makes it possible to tolerate intraoperative clamping. Endovascular treatment is evolving and presents a good alternative for the treatment of SAT aneurysms, either by stent or coil embolization [29].

## Conclusion

Arterial manifestations of Behçet's disease are rare, but their complications present a significant morbi-mortality rate, especially in supra-aortic trunk localizations, since their rupture can be fatal. Medical treatment is imperative and must proceed surgical or endovascular treatment, and continued for life.

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