



Case report

Sacciform aneurysm of the right common iliac artery in Behcet's disease treated with EVAR: Case report

Oussama Anane^{a,b,*}, Abdellah Rezziki^{a,b}, Adnane Benzirar^{a,b}, Omar El Mahi^{a,b}^a Mohammed First University, Faculty of Medicine and Pharmacy, Oujda, Morocco^b University Hospital Center Mohamed VI, Oujda, Morocco

ARTICLE INFO

Keywords:

Iliac artery aneurysm
EVAR
Behcet's disease

ABSTRACT

Introduction: Behcet's disease is a systemic vasculitis with vascular tropism usually manifested by phlebitis. Arterial manifestations are rare, most often result in aneurysms than occlusions. The objective of this article, is to relate our experience and pretherapeutic reasoning for the indication of an endovascular treatment of an atypical sacciform iliac aneurysm, in an elderly patient followed for Behcet's disease.

Case report: This is a 73-year-old patient, followed for Behcet's disease under immunosuppressive treatment and corticosteroids treatment, admitted to our structure, for the surgical management of an aneurysm of the right common iliac artery diagnosed by computed tomographic angiography performed for chronic paroxysmal abdominal pain, treated by EVAR after a multidisciplinary discussion, complicated by a thrombosis of the left leg of the bifurcated aortic stent graft the, managed by performing an extra anatomical bypass, complicated late by the appearance of a Scarpa hematoma, who was evacuated.

Discussion: Behcet's disease is a systemic vasculitis with vascular tropism, usually affecting young. Our case is an elderly subject, whose diagnosis and follow-up of Behcet's disease is recent and whose discovery of this aneurysm was fortuitous, after performing a CT angiogram required for another reason.

The objective of this article, is to relate our experience and pre-therapeutic reasoning for the indication of an endovascular treatment, and our management of the complications.

Conclusion: Endovascular treatment of iliac sacciform aneurysm by placing a covered stent is a good alternative to conventional surgery with fewer complications; especially in front of a field of Behcet's disease.

1. Introduction

Behcet's disease is a systemic vasculitis with vascular tropism usually manifested by phlebitis. Arterial manifestations are rare, most often result in aneurysms, sometimes arterial occlusions.

The interest of this article is to show the atypical radiological appearance of this sacciform common iliac aneurysm, both atheromatous and systemic, even if the patient does not present any cardiovascular risk factor, apart from the age and male sex, then discuss the reasoning and indication of endovascular treatment, complicated by the need to perform hybrid surgery.

2. Case report

This is a 73-year-old patient, followed for 4 months for Behcet's disease under immunosuppressive treatment and corticosteroids

treatment, admitted to our structure, for the surgical management of an aneurysm of the right common iliac artery diagnosed by computed tomographic angiography performed for chronic paroxysmal abdominal pain, in whom the clinical and vascular examination is without abnormalities apart from bipolar aphthosis and tenderness on palpation of the right iliac fossa.

The abdomino-pelvic computed tomographic angiography revealed a sacciform aneurysm of the right common iliac artery with a diameter of 45 mm and a length of 64 mm, partially thrombosed. This aneurysm begins at the origin of the common iliac artery without a superior collar and encompasses the origin of the hypogastric artery, associated with aneurysmal dilation of the terminal part of the abdominal sub-renal aorta measured at 35 mm. The aneurysm extends to the right external iliac artery which measures 20 mm in diameter (Figs. 1 and 2).

As part of the preoperative assessment, a transthoracic ultrasound was performed which is without abnormalities, spirometry shows a mild

* Corresponding author at: 19, Rue Sanaoubar, Cité Basatine, Sidi Yahya, Oujda, Morocco.

E-mail address: oussanane@gmail.com (O. Anane).

<https://doi.org/10.1016/j.ijscr.2021.106172>

Received 11 June 2021; Received in revised form 2 July 2021; Accepted 6 July 2021

Available online 7 July 2021

2210-2612/© 2021 The Authors. Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

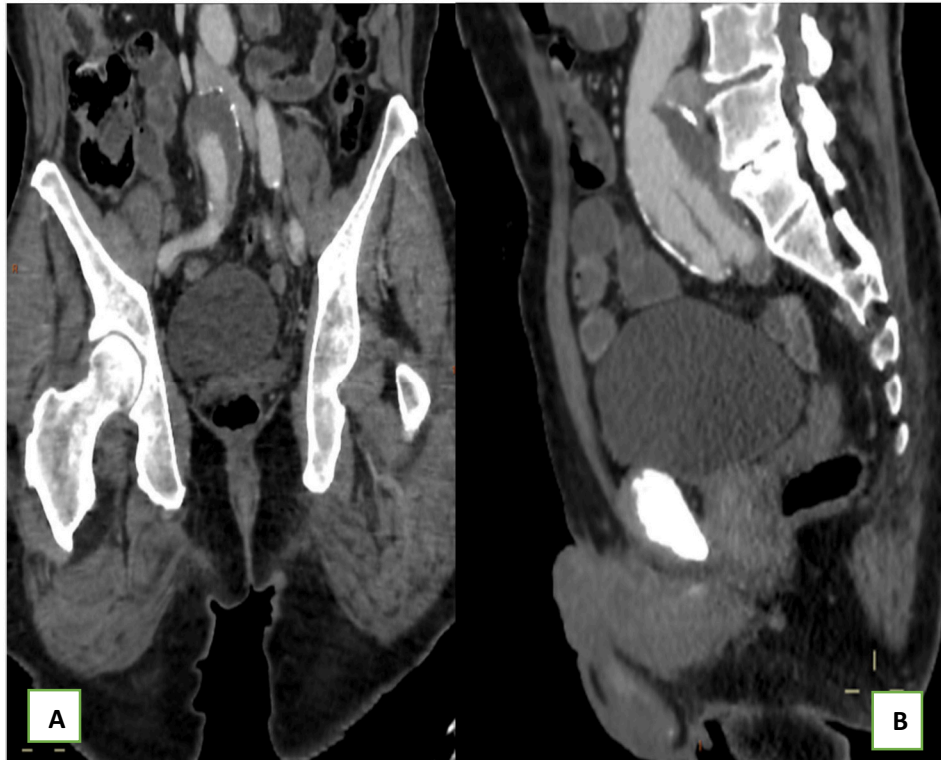


Fig. 1. Coronal (panel A) and sagittal (panel B) section showing the partially thrombosed right primary iliac artery aneurysm with the presence of parietal calcifications.

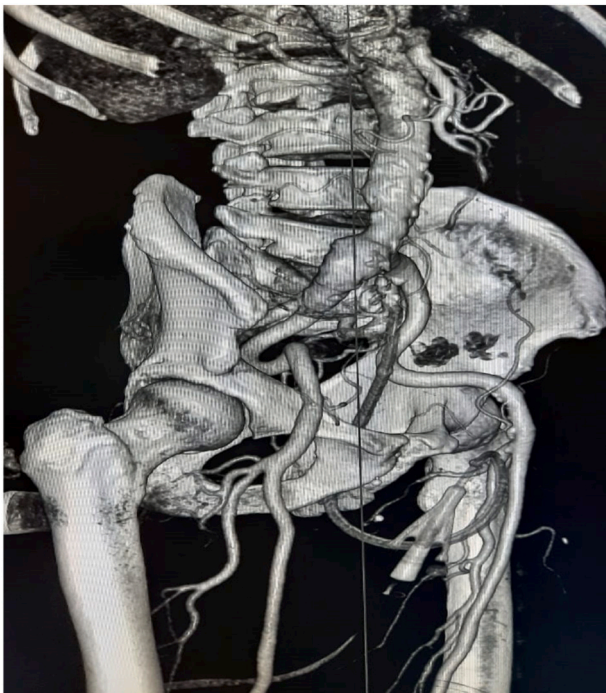


Fig. 2. Real 3D reconstruction image of the CT angiogram showing the presence of an aneurysm of the right primary iliac artery.

obstructive ventilatory disorder with a mild restrictive profile.

After multidisciplinary discussion and given the size of the iliac aneurysm and its sacciform nature, the indication for surgery was retained.

But since the patient is already being followed for Behcet's disease, conventional surgery with flattening of the aneurysm and bypass can run a great surgical risk with a possibility of arterial tearing during arterial clamping, risk of significant bleeding at the level of the arteries, in addition to the risk of vascular trauma during dissection.

For all these reasons, endovascular treatment with placement of a covered aorto-bi-iliac stent graft (EVAR) extended to the right external iliac artery is strongly indicated, after the validation of the feasibility by the sizing of the CT angiogram (Fig. 3).

The patient underwent endovascular treatment by EVAR, with placement of a covered abdominal stent graft aorto-bi-iliac extended to the right external iliac artery, and 15 mm below the renal artery (because the abdominal aorta is aneurysmal before its bifurcation); by an approach of the two common femoral arteries (Fig. 4).

The intervention was complicated by a failure of catheterization of the contralateral left leg, the stump of the contralateral leg was bent during the release of the body of the stent, responsible subsequently for a thrombosis of the left leg (Figs. 4 and 5).

For this, a right-left femoro-femoral extra-anatomical cross bypass in an 8 mm diameter PTFE prosthesis, was performed in order to revascularize the left lower limb.

The final control aortography is satisfactory, showing the exclusion of the iliac aneurysm, the correct positioning of the stent, and finally the absence of endoleaks or other complications.

The postoperative follow-up is simple, so the evolution was

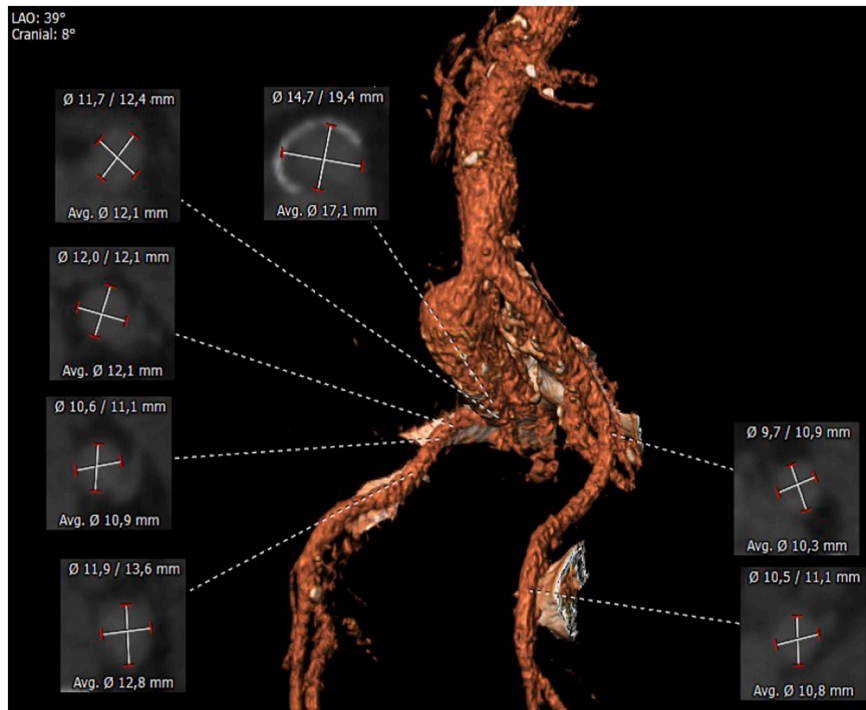


Fig. 3. 3D reconstruction image of the CT angiogram with measurements of the diameters at different stages for the request for a custom-made covered stent graft.



Fig. 4. A: intraoperative image of spotting aortography showing the right common iliac aneurysm with dilation of the abdominal aorta under renal with opacification and spotting of the left renal artery; B: The release of the body of the aorto bi-iliac EVAR complicated by a bending of the stump of the left contralateral leg.

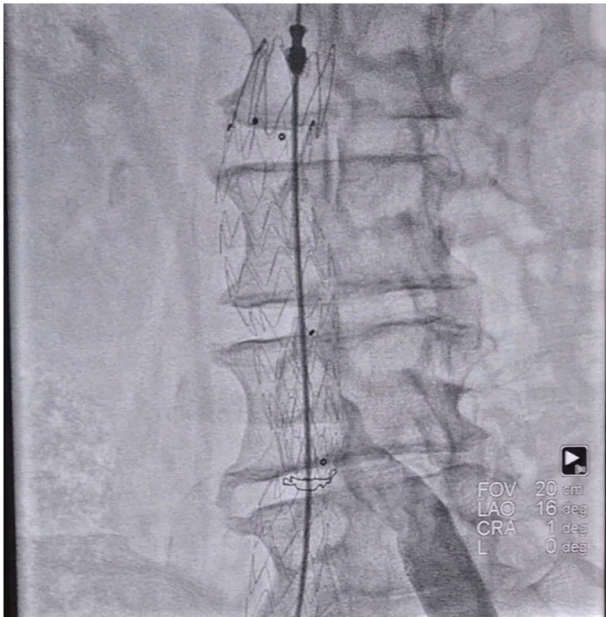


Fig. 5. Intraoperative image after release of the EC showing the retrograde opacification defect of the aorta following thrombosis of the stump of the contralateral limb.

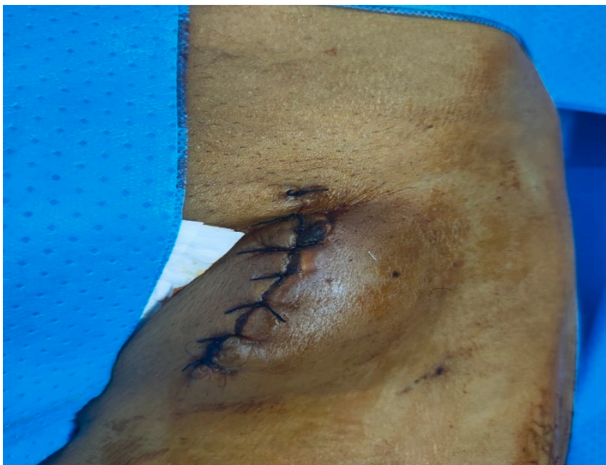


Fig. 6. Hematoma of the left Scarpa with skin inflammation opposite.

satisfactory. The patient returns home with a medical prescription, based on his usual treatment combining immunosuppressant and corticosteroids, in addition to direct oral anticoagulant treatment indicated by the cardiologist for an arrhythmia discovered incidentally.

The patient was readmitted after 15 days following the appearance of

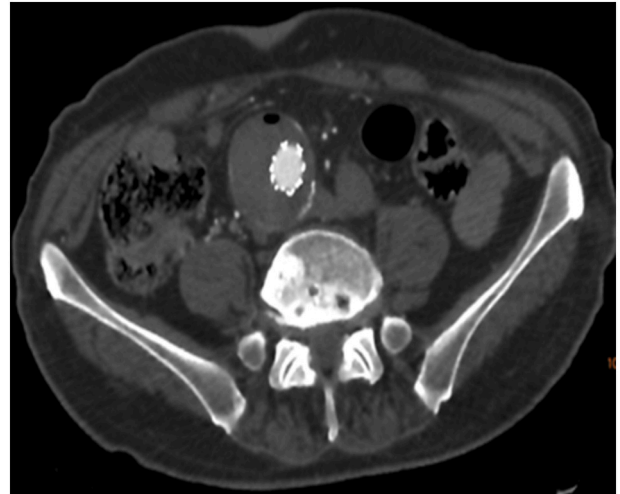


Fig. 7. Axial section of the postoperative CT angiography showing the patency of the right leg with the exclusion of the right primary iliac aneurysm with no endoleak.

a mass next to the left Scarpa whose CT angiography is in favor of a hematoma (Fig. 6), which was drained after the realization of a CT angioscan confirming the hematic nature and objectifying the perfect exclusion of the aneurysm, with the correct positioning of the covered stent graft, and the absence of complications, such as endoleaks or others (Figs. 7, 8 and 9).

(Scare 2020) [5].

3. Discussion

Behcet's disease is a systemic vasculitis with vascular tropism usually manifested by phlebitis. Arterial manifestations are rare, most often result in aneurysms than occlusions [1], Vascular involvement is present in up to 40% of cases, 75% of which are venous in nature, whereas the other 25% are arterial [2], Mortality by rupture is estimated at 60% [1], the treatment is based on immunosuppressants, corticosteroid therapy, embolization or surgery.

The case that we are reporting and taking care of within our hospital structure, during the period of the SARS-COV-2 pandemic, has been followed for 4 months for Behcet's disease, in which the sacciform iliac aneurysm is discovered fortuitously on a CT angioscan, performed in front of another reason of consultation (chronic abdominal pain).

The objective of this article, is to relate our experience and pre-therapeutic reasoning for the indication of an endovascular treatment more advantageous than a conventional surgical treatment [3] which is a great risk of complications given the nature of the disease (hemorrhage, vascular suture loosening ...) and to specify our management of the per- and post-operative complications of EVAR.

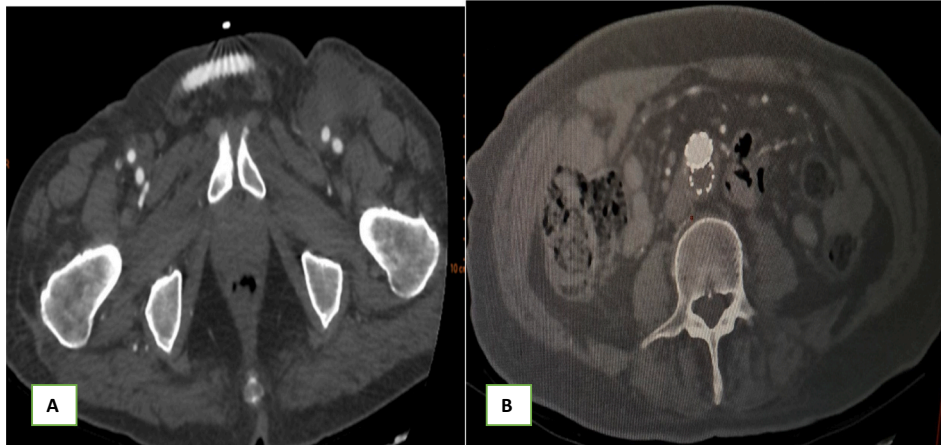


Fig. 8. A: axial section of the postoperative CT angiography; objectifying the presence of a hematoma of the left Scarpa, with visualization of a segment of the cross prosthesis; B: the patency of the right leg with the exclusion of the right primary iliac aneurysm with no endoleak.

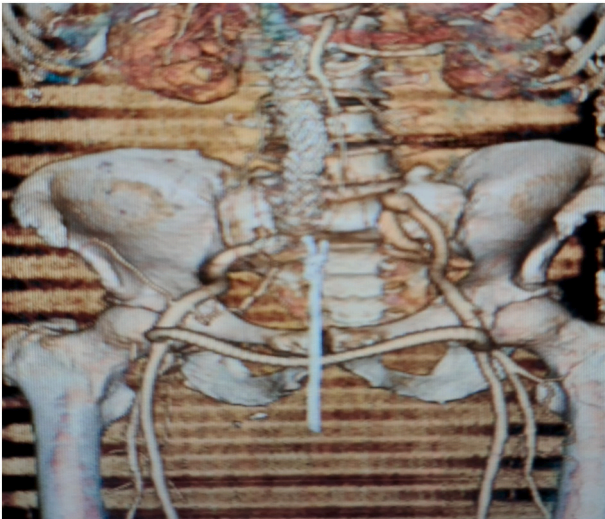


Fig. 9. Real 3D reconstruction image of the postoperative CT angioscan showing the aortoiliac EVAR and the right-left femoro-femoral cross prosthetic bypass performed following thrombosis of the left leg.

4. Conclusion

Endovascular treatment of iliac sacciform aneurysm by placing a covered stent is a good alternative to conventional surgery with fewer complications [4].

Reporting in this article, our management of elderly subject, followed for Behcet's disease, admitted for an aneurysm of the right primary iliac artery of a mixed atheromatous and systemic nature.

Sources of funding

We do not have any financial sources for our research.

Ethical approval

The study committee of the university hospital center approves the favorable opinion to publish this work.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Research contribution

Not Applicable.
Guarantor
Dr. Anane Oussama.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Availability of data and material

The datasets in this article are available in the repository of the ENT database, CHU Mohamed VI Oujda, upon request, from the corresponding author.

CRedit authorship contribution statement

Dr.OA, have analysed and performed the literature research, Pr.AR, Pr.AB, Pr.OE, performed the examination and performed the scientific validation of the manuscript. Dr. Oussama ANANE was the major contributor to the writing of the manuscript. All authors read and approved the manuscript.

Declaration of competing interest

All authors disclose any conflicts of interest.

References

- [1] T. Bakkali, M. Hormatallah, A. Bounssir, N. Aghoutane, H. Taous, Bensaid Idrissi, Y., Faux anévrisme de l'artère iliaque externe révélant Une maladie de Behçet, *Journal de Médecine Vasculaire* (2018), <https://doi.org/10.1016/j.jdmv.2018.07.004>.
- [2] M. Merashli, R.E. Eid, I. Uthman, A review of current management of Vasculo- Behcet's, *Curr. Opin. Rheumatol.* 30 (1) (2018) 50–56, <https://doi.org/10.1097/bor.0000000000000458>.
- [3] Hiroshi Watanabe Hirotaka Oda Tsuyoshi Yoshida Masayuki Yamaura Kazuyoshi Takahashi Tsutomu Miida Naoya Takahashi Satoshi Nakazawa Hiroshi Kanazawa Norio Higuma Yoshifusa Aizawa Endovascular Stent-grafting for Recurrent Aneurysm in Behcet's Disease 10.1536/ihj.46.745 16157966.
- [4] M.E. Memetoglu, A. Kalkan, Behcet's disease with aneurysm of internal iliac artery and percutaneous treatment, *Interact. Cardiovasc. Thorac. Surg.* 14 (3) (2011) 372–373, <https://doi.org/10.1093/icvts/ivr041>.
- [5] for the SCARE Group, R.A. Agha, T. Franchi, C. Sohrabi, G. Mathew, The SCARE 2020 guideline: updating consensus Surgical Case Report (SCARE) guidelines, *Int. J. Surg.* 84 (2020) 226–230.