

ALTERNATIVE ENDOVASCULAR ANEURYSM REPAIR (EVAR) IN A COMPLEX NECK TYPE B DISSECTED AORTA: CASE REPORT AND LITERATURE REVIEW

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INTRODUCTION:

Infrarenal aortic neck pathology is the major limiting factor for endovascular aneurysm procedures, determining inadequate sealing and thereby marked risk of complication¹. Despite of the development of alternative techniques and more appropriate devices, short length neck still represents a crucial anatomical point that can make EVAR unsuitable.

PURPOSE:

The aim of this report was to show an alternative treatment of an aortoiliac aneurysm in the presence of an aortic segmental type B dissection involving the proximal neck.

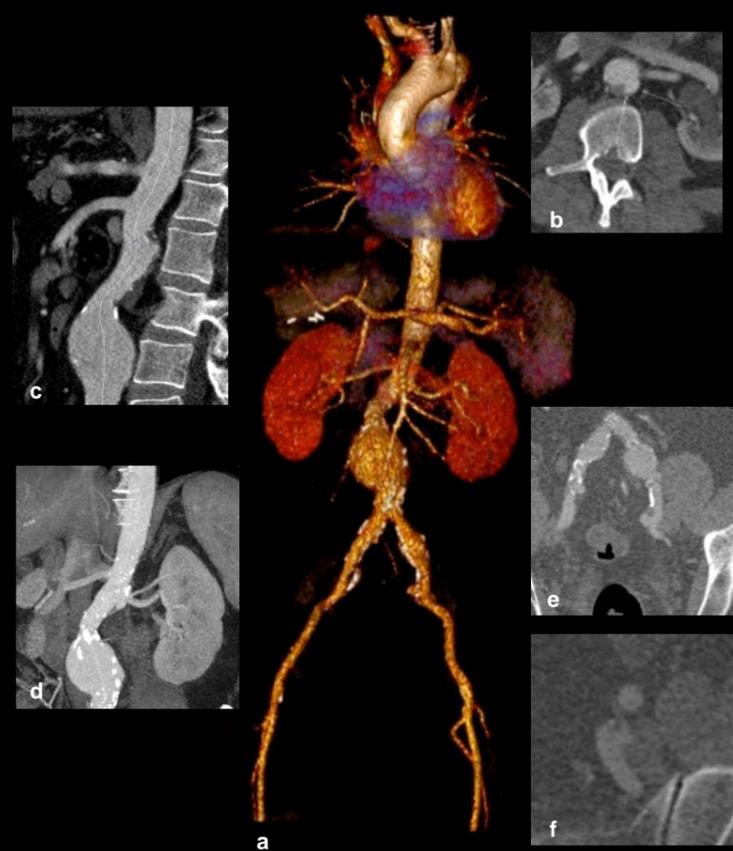


Figure 1. Pre-operative imaging: **a.** Aortic anatomy and aneurysm relations. **b-d.** Juxtarenal aortic dissection. **e-f.** Common and internal left iliac aneurysms.

CASE REPORT:

A 62-years-old male patient was admitted in our unit with an infrarenal aortic aneurysm, associated to a left common and internal iliac arteries aneurysms. The patient had arterial hypertension, type 2 diabetes and was high-risk for surgery because of his cardiopulmonary conditions. The angiotomography showed an aortic segmental type B dissection just below the origin of the left renal artery (**figure 1**).

The initial planning was a *Chimney* graft EVAR, but for a less invasive and shorter procedure, we chose to perform a conventional EVAR, with percutaneous approach, landing the proximal part of the prosthesis in a healthy aortic segment after the dissection end and to treat the type B dissection clinically (**figure 2**).

EVAR was successful using a *Gore Excluder C3* stent-grafts with left internal iliac aneurysm coil embolization.

The postoperative courses were uneventful and the patient was discharged on the third day after the procedure. Follow-up with tomography angiogram at 1 and 6 months demonstrated no evidences of endoleak, neither stent migration or aneurysm sac enhance. False lumen remains stable and the patient asymptomatic (**figures 3 and 4**).

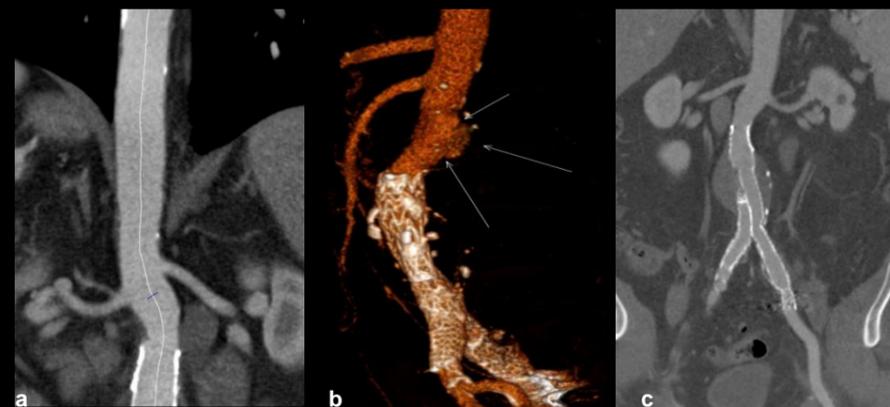


Figure 2: After procedure aspects of the aorta. **a.** Absence of proximal endoleaks. **b.** Maintenance of type B aortic dissection. **c.** Patency of the graft.

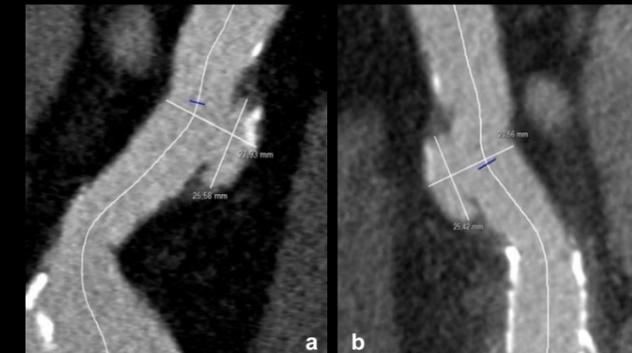


Figure 3: Aortic ulcer (dissection) measurement before (**a**) and after the procedure (**b**). No significant changes were seen in the first and 6 months angiotomographic follow-up.



Figure 4: Illustrative reconstruction of the treated aorta with stent graft.

DISCUSSION:

Endovascular treatment figures as the standard method to treat complex aneurysm and other aortic pathology. Many consecrated techniques such as snorkel or *Chimney* grafts, or branched/fenestrated devices already have a broad spectrum of positive outcomes in the literature^{2,3}, but not manipulating visceral arteries represents lower rates of morbidity⁴.

Non complicated Type B aortic dissection standard treatment is preferentially clinical, specially in asymptomatic patients⁵. Endovascular repair is desired in those patients whose symptoms intensify or in cases of aneurysm sac or false lumen enhance, but is not free of complications and have a considerable rate of mortality^{4,6}.

CONCLUSION:

Less invasive and alternative procedures are feasible, with good long-term performance and lower costs applicability.