

## Case Presentation

62 year old female first presented in 2018 with asymptomatic large Type 3 TAAA. Significant past medical history include Right pelvic kidney. Underwent a staged Left external iliac to R renal artery bypass and 3 vessel Branched endovascular aortic repair with bridging stents to SMA, LRA and celiac artery with bilateral femoral and left axillary artery cutdown. Atrium stents used for SMA and Celiac artery and VBX used for LRA. Patient did well post operatively.

Was followed up routinely, and found to have thrombosed LRA stent in June 2022 with no rise in creatinine. Patient was then found to have an asymptomatic “endoleak” and 1cm sac expansion in January 2023. CTA performed revealed a complete proximal dislocation of SMA stent, was still intact distally (Type 3c). No symptoms of mesenteric ischemia was present.

OPERATION: June 2023

We opted to reline the graft with a begraft +, R open femoral cutdown, 16 French sheath for support. 8.5 french Oscar steerable sheath used (5-0 prolene sutured to proximal sheath and pulled down extracorporeally) to orient towards SMA, cannulated SMA and proximal graft with an angled Glide wire, which was switched for a stiff wire to facilitate deployment of the Begraft+. Patient did well and was discharged on POD 3. Patent SMA stent with no endoleak or sac expansion on follow up after 12 weeks.

## Background

Fenestrated and Branched endovascular aortic repair is a crucial tool in the modern Aortic surgeons armamentarium for the treatment of pararenal and thoracoabdominal aortic aneurysm (TAAA). Endoleak is a known complication of these procedures.

While type 1a/b, 4 and 5 aneurysms occur in relatively low frequency, target vessel related endoleaks, occur at a much higher rate (10% at time of discharge). These are caused by insufficient attachment of bridging stents; integrity, stent separation, or inadequate sealing at the targeted visceral vessel.



## Discussion

1. This may be a more common problem, given the increase in complex aortic endografting and vascular surgeons must become competent in troubleshooting these problems with both open and endovascular creative options
2. Steerable sheaths are a useful tool to minimize the use of further access and their associated complications, they also assist making cannulation a straightforward procedure. Using the suture technique to maintain tension to retain the curve of the sheath is helpful
3. This case stresses the role of continued lifelong follow up in patients with endografts, particularly those with complex EVAR/BEVAR/FEVAR

## References

1. Outcomes of target vessel endoleaks after fenestrated-branched endovascular aortic repair. Kärkkäinen, Jussi M. et al. Journal of Vascular Surgery, Volume 72, Issue 2, 445 – 455
2. Large, single-center databases and the evolution of endovascular therapy for complex aortic aneurysms. Eagleton, Matthew J. et al. Surgery, Volume 162, Issue 5, 963 - 973