


Transgraft Treatment Of Type 2 Endoleaks After EVAR: When And How To Do It

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Disclosure:

WL Gore – Consultant

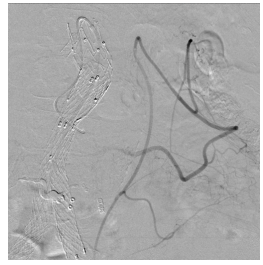
Terumo Aortic– SAB for Fenestrated Aortic Grafting and Educational Consultant

Type 2 Endoleak

- ▶ Occur after 10-25% of EVAR
- ▶ $\geq 80\%$ of type 2 endoleaks spontaneously resolve or the AAA sac does not expand in diameter
- ▶ Remaining cases can increase the sac size with risk of rupture and hemorrhage

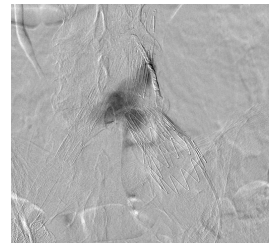
Endovascular Type II Endoleak Management

- ▶ Transarterial
 - Collateral Embolization (IMA, Hypogastric artery catheterization)
 - Perigraft (Retrograde)
 - Transgraft
- ▶ Translumbar
- ▶ Transcaval
- ▶ Open Surgical Ligation
- ▶ Graft Explantation



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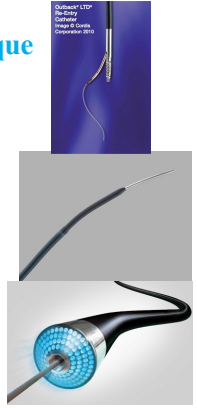


Endovascular Type II Endoleak Management

- ▶ Rule out Type 1 endoleak
- ▶ Successful treatment of type 2 endoleaks is occlusion of the inflow and outflow of the perfusing vessel
- ▶ Embolizing a more peripheral feeder or within the AAA sac itself without occlusion of the inflow will **often fail**, as new collaterals maintain flow into the IMA or lumbar vessels
- ▶ Technical success is limited if:
 - Endoleak inflow source cannot be cannulated
 - Endoleak not in proximity of the endograft

Transgraft Access Technique

- ▶ Endograft is purposely punctured to attain endoleak access
- ▶ Needle Puncture
 - Re-entry Device(Outback or Pioneer)
 - TIPS Needle
 - LASER fiber with Curved or Steerable Sheath
- ▶ Embolization of Endoleak
 - Coils
 - Embolic Glue or Polymer
- ▶ Covered Stent to close access site



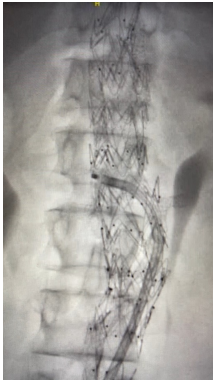
Laser-Assisted Transgraft Embolization: A Technique for the Treatment of Type II Endoleaks

Mark W. Mewissen, MD, M. Fuad Jan, MD, MBBS, David Kuten, MD, and Zvonimir Krajcer, MD


- Case report in 2017 of infrarenal AAA s/p EVAR with Type 2 Endoleak and growth 3 years out
- Translumbar approach not done due to proximity of IVC per authors
- Limb was punctured using coronary laser probe followed by 0.014" wire, microcatheter, Onyx injected into involved lumbar arteries

Transgraft Access

- 6F steerable Sheath
- 2mm Laser



Diagnostic Angiogram confirming within endoleak



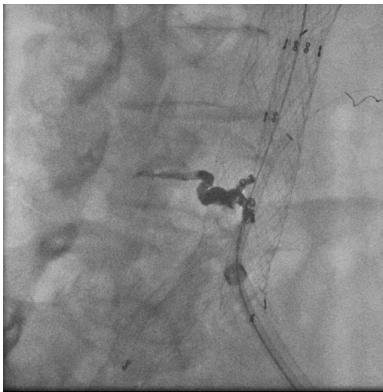
HPI

- ▶ **CC/HPI:** 78-year-old female with history of R solitary kidney (left kidney donation) who is s/p EVAR with AneuRx stent graft and aortic cuff placement at OSH
 - Complicated by right renal artery coverage at OSH
 - Hemodialysis for 2 months.
 - Right renal artery angioplasty and stent in 2014
 - She subsequently had a type 2 endoleak
 - Coil embolization of the IMA in 2014
 - Lumbar artery in 2015.
 - During follow-up, she was noted to have an aneurysm sac expansion from 6.5 cm to 7 cm.
- ▶ **PMH/PSH:** As above, CAD s/p CABG, HTN, HLD, anxiety.
- ▶ **SH:** Former smoker (quit 15 years ago).
- ▶ **Allergies:** NKDA.
- ▶ **Medications:** Aspirin, alprazolam, pantoprazole, tramadol, docusate, simvastatin, diltiazem, hydralazine, ezetimibe.



Treatment

- ▶ Right groin access
- ▶ Selective catheterization of SMA, Internal Iliac arteries and celiac axis without evidence of type 2 endoleak.
- ▶ CT scan Loaded into Siemens Leonardo System and Fusion Software used to mark site of Endoleak.
- ▶ Left groin access
- ▶ Outback reentry device to penetrate through stent graft into aneurysm sac using 12mm balloon to provide support
- ▶ Onyx embolization of aneurysm sac



Patient D/C'ed POD 1

- ▶ Doing well
- ▶ No Pain
- ▶ Follow Up Duplex no evidence of Endoleak and stable sac diameter

Thank You