Failure Modes of EVAR After 10 Years: When can they be treated endovascularly?

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Disclosure

I do not have any potential conflict of interest.

Etiology of Late EVAR Failure

Progressive dilatation of the pararenal aorta
Type Ia endoleak w/ or w/o migration, sac expansion

Anders Wanhainen, MD, et al
Journal of Vascular Surgery
Volume 48, Issue 3, Pages 723-726 (September 2008)
DOI: 10.1016/j.jvs.2008.03.047

Other known etiologies of EVAR failure
More likely to be mid-term rather than > 10 years

- Migration in the absence of pararenal dilatation: less common today
- Stent graft infection
- Unresolved Type II endoleak
- Multiple endoleaks
- Endotension
- Graft limb thrombosis
Other known etiologies of EVAR failure
More likely to be mid-term rather than > 10 years

• Elongation of the aorta from the SMA to aortic bifurcation:
  Component separation and Type III endoleak

Ashwin A. Skibba MD et al
Journal of Vascular Surgery
Volume 62, Issue 4, Pages 868-875 (October 2015)
DOI: 10.1016/j.jvs.2015.04.454

Endovascular Solutions for late EVAR Failure:
Depends on etiology and stent graft design: trunk length / flow divider

Fenestrated and branched devices
Zenia Martin, MD, et al
Journal of Vascular Surgery
Volume 59, Issue 6, Pages 1479-1487 (June 2014)

Etiology of Late EVAR Failure
Progressive dilatation of the common iliac arteries
Type Ib endoleak

Embolization of IIA with extension to EIA
Branched iliac stent graft
Etiology of Late EVAR Failure
Material failure: Type III endoleak

Stent graft relining with use of AUI devices as necessary

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Conclusions

- Long term total aortic surveillance remains essential to identify long term EVAR failures before rupture
- An array of successful endovascular solutions eliminate the need for surgical conversion and explantation in most instances.