Successful Treatment for Late-Onset Juxtarenal Type 1a Endoleak using Scalloped Body Extension and N-butyl cyanoacrylate embolization

M. Shibata M.D.¹,², S. Onozawa M.D., Ph.D.², S Murata M.D., Ph.D.², T. Morota M.D., Ph.D.¹, T. Nitta M.D., Ph.D.¹

¹ Department of Cardiovascular Surgery, Nippon Medical School
² Department of Radiology, Nippon Medical School
COI Disclosure

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Presenting author: Masafumi Shibata
Background

- EVAR for infrarenal AAA reported the prevalence of endoleak as 12.3%.
  

- 30-day mortality rates was 44.4% in patients undergoing repair for delayed rupture.
  

- Of the delayed rupture, the patient with type 1a endoleak was 72.7%.
  
Case

A 76-year-old woman

71 y/o AAA→EVAR (Zenith flex)

Late onset  type 1a endoleak
Preoperative CTA

Rapid expansion of the aneurysm
Φ41mm → 57mm (a year)
Re-intervention was considered necessary due to an ongoing risk of aneurysmal rupture.
The type 1a endoleak originates from 3 mm distal to the right renal artery (RA). The left RA locates distal to the right RA ostium.
Planning

The type 1a endoleak originates from 3 mm distal to the right renal artery (RA).

The left RA locates distal to the right RA ostium.
Planning

A scalloped body extension was required to preserve blood flow to the left RA.

Further, as the distance between the ostium of right RA and the origin of endoleak was too short to secure adequate landing zone, an endoleak repair was considered technically challenging.
Planning

Combination of a scalloped body extension and aneurysmal sac embolization using NBCA.

A long guiding sheath was introduced into the right RA for restoring the patency of the right RA using a bare stent in case of an unexpected occlusion.
Handmade scallop

Zenith flex endovascular graft body extension (ESBE-26-39-ZT)

A scallop was created at the opposite side of the trigger wire.

An IDC coil was sutured as a marker.
Deployment of Scallop microcatheter guidewire in the right RA marker

microcatheter
Sac embolization using NBCA
Confirmation angiography
Confirmation angiography

Right RA

Left RA

IDC coil
Post operative course was uneventful. 3 days later, she was discharged without complications. At a 12 months clinical follow-up visit, CT angiography showed no evidence of endoleak.
Conclusion

Successful outcome was achieved following the treatment of a type 1a endoleak with a scallop and glue embolization.