Transarterial Embolization for Type II Endoleak after Endovascular Abdominal Aortic Repair

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Case

- 65 year-old male
- No complaints
- Known infrarenal abdominal aortic aneurysm (AAA) since 3 years ago
- Medical history
  - DM, HTN
  - Angina pectoris
- Follow-up CT angiography
  - Increased size of AAA
CT Angiography
CT Angiography

CTA one year ago

CTA at the presentation
Should We Repair AAA in this patient?

Yes

- Rapid enlargement of aneurysm
- Large aneurysm (5.6 cm in diameter)

Surgical or Endovascular Repair
Aortography
Rt. Internal Iliac Artery Embolization
Endovascular Aortic Repair

Main body: End  
Left limb: Endurant 16 x 124 mm
Endovascular Aortic Repair

Main body: Endurant 28 x 145 mm
Left limb: Endurant 16 x 124 mm
Follow-up CTA (after 1 week of repair)
Follow-up CTA

Scheme of colic arterial circulation

Follow-up CTA (After 5 weeks of repair)

After 5 weeks of repair

After 1 week of repair
How Should We Treat Type II Endoleak After EVAR in This Patient?

- Observation
- Embolization
  - Tranarterial or Translumbar
SMA angiography

Scheme of colic arterial circulation
Transarterial Embolization

Transend Guide Wire (Boston Scientific)
Progreat microcatheter (Terumo)

5-Fr Cobra angiographic catheter (Cook)
Transarterial Embolization
Transarterial Embolization

Embolization using 5 coils
Transarterial Embolization

Additional Embolization using 33% glue
(1 ml lipiodol + 0.5 ml histoacryl)
Final SMA angiography
Follow-up CTA (after 3 weeks of embolization)
Follow-up CTA

After 3 weeks of embolization

After 7 months of embolization
• In this case, type II endoleak was occurred after EVAR, in which blood travels from IMA through SMA and arc of Riolan.

• Type II endoleak result in continued pressurization of the aneurysm sac and can be associated with aneurysm enlargement.
• Translumbar embolization was effective in 80% of the patients for resolving the type II endoleak.


• However, transarterial embolization had a high failure rate because of multiple communicating arteries.

• In this case, feeding artery of type II endoleak was the only IMA with CTA and direct arteriography and can be catheterized by using a microcatheter.

• Therefore, we experienced successful transarterial embolization of type II endoleak supplied from IMA through SMA and arc of Riolan.