Management of distal entry tears after TEVAR in aortic dissections

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Disclosure

Speaker name: Qingle Li

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest
Background

• Thoracic Endovascular Aortic Repair (TEVAR) for aortic dissection (AD) is becoming the mainstay of treatment.
• After TEVAR@36-48 months, 80.6%-90% total thrombosis of FL at level of the stent graft, but 22%-76.5% below the level of the diaphragm.


• No consensus on the management of distal entry tears for now.
Background

Fate of distal false lumen

• 1 Y after TEVAR, the infrarenal aorta, **diameter increase 17%, volume 22%.**
  Patient outcomes and thoracic aortic volume endovascular aortic repair in patients

• 1 Y after TEVAR, the infrarenal false lumen was decreased only in 33% cases, stable in
  11%, **increased in 56%.**
  Endovascular Repair of Acute Type B Aortic Dissection: Long-Term Follow-Up of

The rupture risk ↑
Higher 3-year survival in patients with aortic remodeling (89%) than without (54%; Log Rank \( p < 0.005 \)).

Background

When to treat

Recommended indications:

• **One stage:**
  True lumen compression: visceral or aortic
  High flow non-paravisceral (>2cm) entry tears

• **Second stage:**
  False lumen enlargement- aneurysm, rupture
  Persistent paravisceral entries - renal atrophy
How to treat

Management choices: Evolving

• Conservative: Medication, CTA follow-up
• Intervention:
  Surgical
  Endovascular: Location of distal entry tears
  Hybrid procedures
Devices

- Stents: Stent-graft, Covered stent, Bare stent
- Coils
- Discs

Combination Innovation
Single-center Data

- 20 patients (2011.4-2017.2): 18 M, 2 F
- Age: 33-82 yr (49.5 ± 13)
- Time from TEVAR to re-intervention:
  - one stage: 2 cases
  - 2\textsuperscript{nd} stage: 18 cases, 7d-10 yr
- Follow up: 15-73mo. (38 ± 16.3)
Management choices:

- Non-paravisceral entry tears: aortic, iliac

  ➡️ Stent-graft or covered stent:
Management choices:

- Paravisceral aorta entry tears (<2cm)
- Stent-graft + Chimney; Bare stent with disc or/and coils
Single-center Data

Management choices:
Intra-visceral artery entry tears

Covered stent / coils
Single-center Data

Follow up results:

• 2 pts died without CTA.

• Preliminary assessment with CTA:
  Complete FL thrombosis   5 (27.8%)
  Partial FL thrombosis    6 (33.3%)
  Patent FL                7 (38.9%)
Case 1  M,80yr,EVAR for 7mos, acute chest pain
Case 2 M, 80yr, chronic AD for 2yrs, enlargement of DA
Conclusions

• Treatment indication for distal entries should be carefully evaluated.

• Treatment method for distal entries should be individually optimized.

• Sealing of entry tear is more effective than coil thrombus inducing.
Thanks for your attention!
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