Mid-term results of endoanchoring for the treatment of intraoperative Type 1A endoleak after EVAR in patients with short infrarenal neck

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Disclosure

Speaker name: ................................................................................

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)

X I do not have any potential conflict of interest
Treatment options for EL Ia

- **Fixation stent-graft:**
  - PALMAZ-XL stent,
  - Endoanchoring
  - + Embolization with fluid agents

- **Need for new neck:**
  - aortic cuff,
  - fenestrated endografting,
  - chimney-endografting
Aim of the study

- To investigate the mid-term results of endoanchoring for treatment of intraoperative type Ia endoleak during EVAR
Study design

- Single center analysis of elective EVAR cases with the Endurant stent-graft
- Data collection period: November 2007 – May 2015

Inclusion criterion

- Intraoperative Type Ia endoleak treated with
- Heli-FX EndoAnchor system
Heli-FX EndoAnchor System

- low profile (16F) delivery system
Heli-FX EndoAnchor System

- Two steps deployment mechanism with reposition ability
- Rotational tip with high fluoroscopic visibility
- Comparable fixation with hand-sew anastomosis

*Melas, JVS, 2012;55:1726-33*
Methods

795 EVAR with Endurant

19 patients (2.4%) with EL Ia

2 treated with proximal cuff

17 treated with endoanchoring
Anatomical characteristics of the neck

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Neck-length (median, IQR mm)</td>
<td>8 (6-9mm)</td>
</tr>
<tr>
<td>Bulged</td>
<td>59%</td>
</tr>
<tr>
<td>Tapered</td>
<td>24%</td>
</tr>
<tr>
<td>With thrombus</td>
<td>12%</td>
</tr>
<tr>
<td>Mean infrarenal angle</td>
<td>44±21°</td>
</tr>
<tr>
<td>Mean maximal aneurysm diameter</td>
<td>58±12 mm</td>
</tr>
<tr>
<td>Calcified</td>
<td>35%</td>
</tr>
</tbody>
</table>
• **Primary endpoint:**
  
  • Technical success
  
  • (successful placement of endoanchors at the desired position without evidence of EL Ia at the completion angiography)
Results

- Technical success: 65% (n=11)
- Freedom from type IA Endoleak at discharge: 82% (n=14)
- Freedom from type IA Endoleak at 24 months: 100% (n=17)
Case presentation
Second case
AAA shrinkage

• (58±12mm > 53±11mm, P=.017)
Aneurysm-related reinterventions

- N=1 (6%) two months after the initial implantation for the treatment of a type II endoleak raised from lumbal arteries

- Embolisation with liquid embolic agent (Onyx)
Results from ANCHOR Registry

- Treatment for intraoperative type IA EL after EVAR: \( n: 52 \) patients
- Technical success: \( 82.7\% \ (43/52) \)
- Freedom from type IA EL in the FU: \( 98\% \ (51/52) \)
Conclusions

– Our results in agreement with the ANCHOR Registry showed high incidence of persistent intraoperative type IA EL and resolution of the type IA in all cases without any proximal neck-related reintervention in the mid-term FU.

– **Dilation of the nitinol** endoskeleton and hemodynamic change of high to low flow type IA endoleaks
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